



CALL NO. 329

CONTRACT ID. 212510

PULASKI COUNTY

FED/STATE PROJECT NUMBER FD04 100 1247 003-005

DESCRIPTION INTERSECTION OF KY 914 AND MURPHY AVENUE (KY 1247)

WORK TYPE JPC PAVEMENT

PRIMARY COMPLETION DATE 6/30/2022

LETTING DATE: December 10,2021

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 am EASTERN STANDARD TIME December 10,2021. Bids will be publicly announced at 10:00 am EASTERN STANDARD TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

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PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 08

CONTRACT ID - 212510
FD04 100 1247 003-005
COUNTY - PULASKI
PCN - MP10012472101
FD04 100 1247 003-005

INTERSECTION OF KY 1247 AND MURPHY AVENUE (KY 1247) (MP 3.858) BEGINNING AT THE NORTH END OF THE BRIDGE OVER N/S RAILROAD EXTENDING NORTH TO 330 FEET NORTH OF SHOPFIELD ROAD. (MP 4.154), A DISTANCE OF 0.29 MILES.JPC PAVEMENT
GEOGRAPHIC COORDINATES LATITUDE 37:03:04.03 LONGITUDE 84:35:16.16

COMPLETION DATE(S):
COMPLETED BY 06/30/2022 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by [KRS 14A.9-010](#) to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under [KRS 14A.9-030](#) unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in [KRS 14A.9-010](#), the foreign entity should identify the applicable exception. Foreign entity is defined within [KRS 14A.1-070](#).

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially

disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

April 30, 2018

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

RECIPROCAL PREFERENCE TO BE GIVEN BY PUBLIC AGENCIES TO RESIDENT BIDDERS

By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the electronic bidding software. Submittal of the Affidavit should be done along the bid in Bid Express.

April 30, 2018

SURFACING AREAS

The Department estimates the mainline surfacing width to be varied 65-85 feet.

The Department estimates the total mainline area to be surfaced to be 3,498 square yards.

The Department estimates the shoulder width to be 0 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 0 square yards.

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

OPTION B

Be advised that the Department will control and accept compaction of asphalt mixtures furnished on this project under OPTION B in accordance with Sections 402 and 403.

SPECIAL NOTE FOR JPC INTERSECTION PAVEMENT

I. DESCRIPTION

Except as specified herein, construct Jointed Plain Concrete (JPC) intersection pavement in accordance with the Department's Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Section references are to the Standard Specifications. Furnish all materials, equipment, labor, and incidentals for:

- (1) Removing asphalt and/or concrete pavement and replacing with JPC Pavement; (2) Maintaining and controlling traffic; and (3) All other work specified as part of this contract.

II. MATERIALS

The Department will sample and test all materials according to the Department's sampling Manual. Make the materials available for sampling a sufficient time in advance of their use, to allow for the necessary time for testing, unless otherwise specified in these notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Dense Graded Aggregate. Do not furnish Crushed Stone Base in lieu of DGA.

C. Jointed Plain Cement Concrete Pavement. Use JPC Pavement 11 IN/24. At Contractor's request and at no additional cost to the Department, the Engineer may approve other high early strength rapid setting concrete. The Department will allow either central mixing or truck mixing.

D. Joint Sealant. Use hot poured elastic, no alternates.

E. Traffic Signal Loops. See Special Notes for Traffic Signal Preformed Loop Replacement.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Be responsible for all site preparation, including but not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration; temporary and permanent erosion and pollution control; final dressing, clean

JPC Intersection
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up, and seeding; and all incidentals. Perform all Site Preparation only as approved or directed by the Engineer.

C. Pavement Removal. Consider pavement removal locations and dimensions shown on the drawings to be approximate only; the Engineer will determine exact locations and dimensions at the time of construction. Prior to removal, saw-cut existing asphalt and/or concrete pavement at locations directed by the Engineer to provide a neat edge where new concrete will adjoin existing pavement. Remove existing asphalt and/or concrete pavement, underlying stone base if necessary to provide for the specified thickness of the replacement JPC Pavement.

D. Concrete Pavement Replacement. Prior to pavement removal and placing JPC Pavement, obtain the Engineer's approval of proposed method of construction for ensuring and establishing a smooth profile. Immediately after removing asphalt pavement, stabilize the base as directed by the Engineer with crushed stone base and place the replacement JPC in a continuous operation in accordance with the Traffic Control Plan Phasing and as directed by the Engineer. Construct the replacement JPC Pavement with a minimum depth of 11 inches; however, transition the finished grade to match adjacent pavement that is to remain in place; therefore, the actual thickness of the pavement may be greater than 11 inches in some areas. Consolidate the concrete, strike off, machine finish with a vibrating or roller screed, and straightedge the plastic concrete with a straightedge conforming to Section 501.02.18. Test the profile of the finished pavement with a 12 foot straight edge according to Section 501.03.19. Provide positive drainage upon completion of construction.

E. Joint Sealing. Saw, clean, and seal transverse and longitudinal joints as shown on the standard drawings and as directed the Engineer.

F. Traffic Signal Loops. See Special Notes for Traffic Signal Preformed Loop Replacement. Protect lead wires from each loop to the junction box during each phase of the construction sequence at no additional cost to the Department.

G. Disposal of Waste. Dispose of all cuttings, debris, and other waste off the right-of-way at sites obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

H. Pavement Markings. See traffic Control Plan.

JPC Intersection
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I. On-Site Inspection. Prior to submitting a bid, make a thorough inspection of the site and become thoroughly familiar with the existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made. The Department will not honor any claims resulting from site conditions.

J. Property Damage and Restoration. Be responsible for all damage to public and/or private property resulting from the work. Repair or replace all damaged roadway features in like kind materials and design at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner.

K. Caution. Consider information shown on the drawings and in this proposal and the types and quantities of work listed are approximate only, and not as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information shown.

L. Utility Clearance. Determine the location of all underground and overhead utilities prior to construction. It is not anticipated that utility facilities will need to be relocated and/or adjusted; however, in the event that work does require relocation and/or adjustment, the utility companies will work concurrently with the Contractor while relocating their facilities.

M. Final Dressing, Clean Up, and Seeding and Protection. After all work is completed, remove all waste and debris from the construction sites. Remove all temporary shoulder widening and restore disturbed shoulders. Perform Class A final dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. 1.

N. Coordination of Work. Be advised that other projects may be in progress within or in the near vicinity of this project. Take into consideration that the traffic control of those projects may affect this project and the traffic control of this project may affect those projects. Coordinate the work on this project with the work of the other contractors. In case of a conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

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IV. METHOD OF MEASUREMENT

The Department will measure only the bid items listed. All other items required to complete the construction shall be incidental to the listed bid items.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Other than the bid items listed, site preparation will not be measured for payment, but will be incidental to the other items of the work.

C. Remove Pavement. The Department will measure removed asphalt pavement in cubic yards of Roadway Excavation.

D. JPC Pavement-11 IN/24. See Section 502.04.01 and Section 501.04.01.

E. Joint Sealing. The Department will not measure Joint Sealing for payment, but shall be incidental to the bid item JPC Pavement-11 IN/24.

F. Signal Loops. See Special Notes for Traffic Signal Preformed Loop Replacement.

G. Smooth Dowels, Deformed Tie Bars, and Hook Bolts. The Department will not measure smooth dowels, deformed tie bars and hook bolts, but will be incidental to JPC Pavement-12 IN/24.

IV. BASIS OF PAYMENT

The Department will make payment only for the bid items listed. All other items required to complete the construction shall be incidental to the bid items listed.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Remove Pavement. Payment at the contract unit price per cubic yard of Roadway Excavation shall be full compensation for saw cutting, milling and texturing, and removing existing pavement (asphalt and/or concrete); disposing of waste and debris.

C. JPC Pavement-11 IN/24. See Section 502.05.

D. Signal Loops. See Special Notes for Traffic Signal Preformed Loop Replacement.

SPECIAL NOTE FOR STAKING

It is intended to replace the existing asphalt surface at the same line and grade with new JPC Pavement. Therefore, a field survey of the existing pavement is required in order to establish the existing cross slopes, transitions and profile. Irregularities in the existing pavement are to be eliminated with the construction of a smooth line and grade of the new JPC pavement to ensure the best rideability possible.

The Department will measure "Staking" as a Lump Sum item. Payment at the contract unit price shall be full compensation for all labor, materials, equipment and incidentals necessary to complete the survey and establish grade during construction.

SPECIAL NOTE FOR ROADBED STABILIZATION

I. DESCRIPTION.

Except as provided herein, perform roadbed stabilization in accordance with the Department's Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of furnishing all materials, equipment, labor, and incidentals for:

- (1) Maintain and Control Traffic; (2) Site Preparation and Erosion Control;
- (3) Undercut the existing roadbed and backfill; (4) Perforated Pipe Drainage System; and (5) All other work specified in the Contract.

II. MATERIALS.

Provide for sampling and testing all materials in accordance with the Department's Sampling Manual. Make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

B. Geotextile Fabric. Furnish Geotextile Fabric, Class 2.

C. Trench Backfill. Furnish Crushed Stone. Use a composition of Crushed Limestone coarse aggregate only, sizes No.23, and 57.

D. Top Course Backfill. Furnish Dense Graded Aggregate, no alternates. Do not furnish Crushed Stone Base (CSB) or Stabilized Aggregate Base (SAB) in lieu of DGA.

E. Perforated Pipe Drainage System. Furnish 4 inch Perforated and Non-Perforated Pipe and Perforated Pipe Headwalls.

III. CONSTRUCTION.

A. Maintain and Control Traffic. See Traffic Control Plan.

Roadbed Stabilization
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B. Site Preparation. Perform site preparation, including but not limited to saw cutting pavement and base; clearing and grubbing and tree and stump removal; embankment, borrow, and embankment in place; removal of existing obstructions or any other items; temporary erosion and pollution control; disposal of materials, waste, and debris; restoration, clean up, and final dressing; seeding and protection, and any other incidentals.

C. Erosion Control. See Special Note for Erosion Control.

D. Staking. See Special Note for Staking.

E. Pavement Removal. Consider pavement removal limits shown on the drawings to be approximate only. The Engineer will determine actual pavement removal limits at the time of construction. Prior to removing pavement, saw cut the existing asphalt surface and underlying PCC pavement (if present) and DGA or other stone base. Remove the existing pavement and base under the traffic lanes and shoulders as the Engineer directs.

F. Undercut and Backfill After removing the pavement and base, undercut the subgrade as required. The Engineer may increase the undercut depth to accommodate proposed finished grade elevations and/or where unstable materials remain. Place geotextile fabric in the bottom and against the sides and ends of the undercut trench. Provide transverse and longitudinal laps between adjacent sheets of geotextile fabric so that backfill remains completely confined within the geotextile fabric during and upon completion of construction. Backfill the undercut with a layered composition of Crushed Limestone sizes No. 23 and 57 with larger size on the bottom.

Place geotextile fabric over the Crushed Limestone and compact the trench backfill material by “walking down” with equipment, or other methods the Engineer approves. After compacting the trench backfill, place DGA top course. Use DGA in the top 4 inches, and only in the top 4 inches, of the backfill.

See attached drawing for details of backfill placement.

G. Perforated Pipe Drainage System. Construct perforated pipe drainage system as shown on the drawing. Wherever possible, slope all pipe to drain to the outside. Construct outlet pipe with a 1:24 ($\frac{1}{2}$ "/foot) or greater slope. Whenever possible, outlet the perforated pipe system to existing drainage boxes with Cored Hole Drainage Box Connectors. If not outletted to an existing drainage box, outlet to a Perforated Pipe Headwall as shown on Standard Drawing RDP-010-08. Locations of perforated pipe headwalls will be determined by the engineer.

Roadbed Stabilization
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H. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Repair or replace all damaged roadway features in like kind materials and design at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner.

I. Coordination with Utility Companies. The Department **has not** located utilities. Locate all underground, above ground and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of the work.

J. On-Site Inspection. Make a thorough inspection of the site prior to submitting bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a Contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made. The Department will not consider any claims resulting from site conditions, including utilities.

K. Right of Way Limits. The Department has not established exact limits of the Right-of-Way. Limit Contract activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

L. Disposal of Waste, Final Dressing, and Clean-Up. Dispose of all removed pavement, base, concrete, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department (see Special Note for waste and Borrow). Backfill all excavated areas and compact as directed by the Engineer. Perform Class B Final Dressing on all disturbed areas, both on and off the right of way. Sow all disturbed earthen areas according to the Special Notes for Erosion Control.

M. Control. Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all design modifications proposed by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other Contractors and its own forces and to permit public utility companies and others to do work during the construction of and within the limits of, or adjacent to, the project. Conduct work activities and operations in cooperation with such other parties so that interference with such other work will be reduced to a minimum. The Department will consider submission of a bid as Contractor's agreement to not make any claims for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties

Roadbed Stabilization
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involved in order to assure the completion of the Department's, Contractor's, and Other's work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

O. Caution. Without regard to the materials encountered, consider all pavement removal and roadway, drainage, solid rock, and special excavation to be unclassified. Distinctly understand that any reference to asphalt, base, concrete, rock, earth, or any other material in these notes or on the drawings, whether in numbers, words, letters, or lines, is solely for the Department's information and is not to be taken as an indication of classified pavement removal, excavation, or any other material involved. The bidder must draw his own conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation or extension of Contract time if the materials encountered are not in accord with the classification shown.

IV. MEASUREMENT.

The Department will measure only the bid items listed. All other items required to complete the construction shall be incidental to the listed bid items.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. The Department will not measure site preparation for separate payment, but shall be incidental to Pavement Removal, Backfilling Undercut, and Perforated Pipe System bid items, as applicable.

C. Erosion Control. See Special Note for Erosion Control.

D. Removing Pavement. The Department will measure pavement removed within the limits specified by the Engineer as cubic yards of roadway excavation. The Department will consider removing the pavement to include existing asphalt pavement, existing asphalt patching, underlying PCC pavement (if present), and existing DGA or other stone base.

E. Undercut. The Department will field measure undercut below existing DGA or other stone base as unclassified Roadway Excavation in cubic yards.

F. Backfilling Undercut. The Department will measure Geotextile Fabric, Class 2 in square yards; however, the Department will not measure laps, cutoffs, excess, and waste. The Department will measure the trench backfill material as Crushed Stone and DGA in Tons.

Roadbed Stabilization
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G. Perforated Pipe Drainage System. The Department will measure the quantity of Perforated and Non-Perforated pipe of each type in linear feet. The department will measure Cored Hole Drainage Box Connector and Perforated Pipe Headwalls of each type in individual units, Each.

V. PAYMENT.

The Department will make payment only for the bid items listed. All other items required to complete the construction shall be incidental to the bid items listed.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See special Note for Erosion Control.

C. Removing Pavement. Accept payment at the Contract unit price per cubic yard of roadway excavation as full compensation for all materials, equipment, labor and incidentals necessary to complete the work as specified in these notes and the Standard Specifications for saw cutting and removing the existing asphalt surface, underlying PCC pavement (if present), and DGA or other stone base under the traffic lanes and shoulders as the Engineer directs.

D. Backfilling Undercut. Accept payment at the Contract unit price per cubic yard for Roadway Excavation, per square yard for Geotextile Fabric, and per ton for Crushed Stone and DGA as full compensation for all materials, equipment, labor and incidentals necessary to complete the work as specified in these notes and the Standard Specifications for undercutting pavement, backfilling with coarse aggregate wrapped in geotextile fabric, and constructing DGA top coarse

E. Perforated Pipe Drainage System. Accept payment at the Contract unit price per linear foot for Perforated and Non-Perforated pipe and for individual units, Each for Cored Hole Drainage Box Connector and Perforated Pipe Headwall as full compensation for all materials, equipment, labor and incidentals necessary to complete the work as specified in these notes and the Standard Specifications for constructing perforated pipe drainage system.

SPECIAL NOTE FOR PREFORMED QUADRAPOLE LOOPS

I. DESCRIPTION.

Except as specified herein, perform all work in accordance with the Departments 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Article references are to the Standard Specifications. Furnish all materials, equipment, labor, and incidentals for placement of preformed quadrapole loops, preformed loops, preformed loop/lead-In, loop lead-in, conduit, junction box, wiring, and connection to the existing signal system.

A. PREBID REQUIREMENTS.

Each contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.

Information provided in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw their own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information shown.

It is not anticipated that utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities.

II. MATERIALS.

Except as provided herein, provide materials according to Section 723.02 and Section 835.

- A. Preformed Quadrapole Loops or Preformed loops.** All preformed loop wire shall be 16-gauge THWN stranded copper, single conductor in a 2-4-2 configuration for Quadrapole as shown on the Quadrapole Loop detail. If it is a 6'x6' loop, it shall have 3 turns installed in the preformed loop. The loop shall be housed in a class A oil resistant heavy-duty reinforced rubber hose with a 250-PSI internal pressure rating. Hose for the loop assembly shall be one continuous piece. The 3/8" I.D. (5/8" O.D.) hose shall be factory assembled. Preformed loops shall be pre-wired. The loop configuration lengths shall be assembled for the specific application. Hose tee connections shall be high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing the glue joints. The tee shall have

Preformed Quadrapole Loops
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the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking.

1. Preformed Loop/Lead-In. All preformed loop/lead-in (homerun) wire shall be 16-gauge THWN stranded copper, single conductor in a 2 configuration for homerun wire as shown on the quadrapole Loop detail. The homerun wire is from the junction box to the edge of the quadrapole loop. The home run shall be housed in a class A oil resistant heavy-duty reinforced rubber hose with a 250-PSI internal pressure rating. Hose for the loop and home run wire assembly shall be one continuous piece from the hose tee. The 3/8" I.D. (5/8" O.D.) hose shall be factory assembled. Homerun wires shall be pre-wired. The homerun lengths shall be assembled for the specific application. Hose tee connections shall be high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing the glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking.

B. Maintain and Control Traffic. See Traffic Control Plan.

C. Sand. Furnish natural sand meeting the requirements of 804.04.01.

D. Seeding. Furnish Seed Mix Type I.

E. Loop Saw Slot and Fill. Furnish loop sealant, backer rod, and non-shrink grout according to the Saw Slot Detail. Only to be used if sawing into existing pavement. Most of the time the preformed loops will be laid on the ground under the final concrete inlay.

F. Junction Boxes. Furnish junction box type B, #57 aggregate, and geotextile filter class 2 according to junction box detail.

G. Cable No. 14/1 pair. Furnish cable that is specified in section 835. Cable shall be ran splice free. This shall include splice kits to connect to the preformed loop/lead-in (homerun).

H. Conduit. Furnish and install appropriate conduit from transitions to the roadway, junction boxes and poles. See details below.

III. CONSTRUCTION.

Except as specified herein, perform all work in accordance with the Departments 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Except as provided herein, construct Preformed Quadrapole Loops in accordance with applicable portions of Section 723.

A. Testing. The contractor shall test all loops and cable no 14/1 pair (lead-in)

Preformed Quadrapole Loops
Page 3 of 13

according to section 723.03.17 before and after concrete inlays' construction. The contractor may have to separate the loop from the lead-in to perform this test. If the loop/lead-in meets the requirement in section 723 at the controller cabinet, the loop/lead-in shall not be replaced. If the existing loop or preformed loop does not meet the requirement according to section 723.03.17 either before or after the concrete inlay, the loop shall be replaced. If the loop is replace before the concrete inlay, the contractor shall verify that the loop meets the requirements per section 723.03.17 before the final concrete inlay is laid. If the loop does not meet per section 723.03.17, the contractor shall replace the loop or preformed loop and it will be incidental to the concrete inlay bid item. The contractor shall be responsible to re-splice the current loop to the lead-in with the proper splice as noted in the spec book (this will be incidental to the project).

B. Coordination. Notify the Engineer in writing, two (2) weeks prior to beginning any work. The Engineer will contact and maintain liaison with the District Traffic Engineer and the Central Office Division of Traffic Operations to coordinate the Department's operations with the Contractor's work. The electrical contractor shall coordinate with the general contractor and inspector to ensure the preformed loops are located and installed prior to placing the concrete inlays for each lane, JPC Pavement and JPC Shoulders, and operational prior to opening JPC Pavement to traffic.

C. Connection. The contractor shall schedule all signal loop installation to ensure the new loops are connected to the lead-in and operational within 7 calendar days of the old loops being damaged and/or disconnected. This requirement includes damage caused by any work activity associated with the project. If the new signal loops are not functioning as intended following 7 calendar days, the Department may assess Liquidated Damages at a rate of \$500 per calendar day per signal location until the loops are operating at pre-construction conditions. All liquidated damages will be applied cumulatively.

D. Maintain and Control Traffic. See Traffic Control Plan.

E. Concrete inlays. The contractor shall coordinate with the concrete contractor and the resident engineer to get preformed loops installed in a timely matter. The contractor may have to use 1" PVC conduit in sections of the concrete inlay for transition from lane to lane so that the perform loop or perform loop/lead-in can be connected to the perform loop. The PVC conduit shall be incidental to the project. The contractor may have to use the preformed to keep the loop functioning while the installation of the other concrete inlays lanes. The preformed loop may be attached to the top pavement as recommended by the manufacturer.

F. Milling. If milling and texturing of the existing pavement, install preformed loops or preformed loop/lead-in in the existing pavement before or after performing the milling and texturing. If, after milling, the remnant contents of the existing saw slot (grout, loop wires, backer rod, and/or loop sealant) are not intact and flush with or below the top of the milled portion of the asphalt and with the saw slot completely filled with fines from the milling operation, clear the saw slot of loose remnant contents and refill the saw slot with natural sand. Obtain the Engineer's approval of the stabilized saw slot prior to

Preformed Quadrapole Loops

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resurfacing. The Department will not measure for separate payment clearing and stabilizing the saw slot, but shall consider this work incidental to Asphalt Pavement Milling and Texturing.

E.

D. Loop Saw Slot and Fill. This will only be used if installed in existing concrete or in asphalt. The following is a typical step by step procedure for the installation of a loop.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/4-inch wide and at a depth such that the top of the backer rod is a minimum of 4 inches below the surface of asphalt/concrete pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45° angle to the conduit adjacent to the roadway. There will be one for each homerun.
- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.
- Place the preformed loop and homerun splice-free from the termination point (cabinet or junction box) to the preformed loop.
- Push the preformed loop and homerun into the saw slot with a blunt object such as a wooden stick. Make sure that the preformed loop and homerun is pushed fully to the bottom of the saw slot. Screwdrivers shall not be used.
- Install duct sealant to a minimum of 1 inch deep into the cored 1½ inch hole.
- Apply loop sealant from the bottom up and fully encapsulate the preformed loop and homerun in the saw slot. The preformed loop and homerun should not be able to move when the sealant has set.
- Cover the encapsulated preformed loop and homerun with a continuous layer of backer rod along the entire loop and home run saw slots such that no voids are present between the loop sealant and backer rod.
- Finish filling the saw cut with non-shrinkable grout per manufacturer's instructions. Alleviate all air pockets and refill low spaces. There shall be no concave portion to the grout in the saw slot. Any excess grout shall be cleaned from the roadway to alleviate tracking.
- Clean up the site and dispose of all waste off the project.
- Ensure that the grout has completely cured prior to subjecting the loop to traffic. Curing time varies with temperature and humidity.

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E. Final Dressing, Clean Up, and Seeding. After all work is completed, clean work sites and all disturbed areas. Dispose of all waste and debris off the right of way at sites obtained by the Contractor at no additional cost to the Department. Sow all disturbed earthen areas with Seed Mix Type I.

F. Removal: The contractor shall remove all existing junction boxes, wire from spans/poles/junction boxes/conduits, and conduits. The removal will be incidental to the project.

G. Property/roadway Damage. The contractor shall be responsible for all damage to public and/or private property resulting from the work. Upon completion of the work, restore all disturbed highway features and private property in like kind design and materials at no additional cost to the Department.

H. Right-of-Way Limits. The Department has not established exact limits of Right-of-Way. Limit work activities to obvious Right-of-Way and work areas secured by the Department through Consent and Release of the adjacent property owners. Be responsible for all encroachments onto private lands.

I. Utility Clearance. Work around and do not disturb existing utilities. The Department does not anticipate that existing utilities will require relocation; however, if utility relocation is required, the utility companies will work concurrently with the Contractor while relocating their facilities.

J. Caution. Consider the information in this proposal and shown on the plans and the type of work listed herein to be approximate. Do not take the information to be an accurate evaluation of the materials and conditions to be encountered during construction. The bidder must draw their own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claims for additional compensation if the conditions encountered are not in accordance with the information shown.

K. Control. Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with each other's work will be reduced to a minimum. By submitting bid, the Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

L. Bore and Jack. This will be used if the conduit is under pavement of any kind. The conduit shall be 2" rigid steel conduit under all pavement areas except for the area that the loop transition from the saw slot. The installation of conduit should follow the detail below.

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IV. MEASUREMENT

The Department will measure for payment only the bid items listed. See section 723.04 for bid item notes. All other items required to complete the construction shall be incidental to the bid items listed.

- A. Maintain and Control Traffic.** See Traffic Control Plan.
- B. Preformed loop quadrapole loops.** Bid item 20453ES835. Usually used for 6x30 loops.
- C. Preformed loops.** Bid item 20452ES835. Usually used for 6x6 loops.
- D. Preformed loop/lead-in.** Bid item 4894.
- E. Cable No. 14/1 Pair.** Bid item 4850.
- F. Loop saw slot and fill.** Bid item 4895.
- G. Conduit.** Bid item 4792, 4793, and 4795.
- H. Trenching and Backfilling.** Bid item 4820.
- I. Electrical Junction boxes type B.** Bid item 4811.
- J. Bore and Jack Conduit.** Bid item 21543EN.

V. PAYMENT

The Department will make payment for the completed and accepted quantities of listed items according to Section 723.05. The Department will consider payment as full compensation for all work required under these notes and the Standard Specifications.

Construction and measurement notes that are contrary to section 723:

Subsection: 03.02 pole and base installation.

Revision: Replace the first paragraph with the following: regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base. Orient the handhole door away from traffic travel path. If pole base is installed within a sidewalk the top of the pole base shall be the same grade as the sidewalk.

Subsection: 03.02 pole and base installation.

Part: a) steel strain and mast arm pole installation.

Revision: Insert the following sentence at the beginning of the first paragraph: install pole bases 4 to 6 inches above grade.

Subsection: 03.02 pole and base installation.

Part: a) steel strain and mast arm pole installation.

Revision: Replace the second paragraph with the following: for concrete base installation, see subsection 716.03.02 b), 2), paragraphs 2-6. Drilled shaft depth shall be based on the soil conditions encountered during drilling and slope condition at the site. Refer to the design chart below:

Subsection: 03.02 pole and base installation

Part: b) pedestal or pedestal post installation.

Revision: Replace the second sentence with the following: if over 12 feet high the base shall

Preformed Quadrapole Loops
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have the minimum depth and diameter as subsection 716.03.02 (a), paragraph 2.

Subsection: 03.03 trenching.

Revision: Replace the first sentence with the following: see subsection 716.03.03 (b).

Subsection: 03.03 trenching.

Part: a) under roadway

Revision: Delete part a) under roadway.

Subsection: 03.05 conduit requirements in junction boxes.

Revision: Delete the subsection and replace with the following: 723.03.05 fuse connector kits. See subsection 716.03.09.

Subsection: 03.06 coupling installation.

Revision: Delete the subsection and replace with the following: 723.03.06 painting. See subsection 716.03.15.

Subsection: 03.07 bonding requirements.

Revision: Delete the subsection and replace with the following: 723.03.07 electrical junction boxes. See subsection 716.03.10.

Subsection: 03.15 painting

Revision: Remove title and revised to remove signal equipment. Replace entire note with the following:

Remove all traffic signal equipment that is identified by the engineer as no longer necessary including, but not limited to, the following: pole bases, poles, junction boxes, cabinets, wood poles, and advance warning flashers. Pole bases shall be removed a minimum of one foot below finished grade by chipping off or other method that is approved by the engineer. Dispose of all removed concrete off right-of-way. Wood poles shall be removed a minimum of one foot below finished grade. Backfill holes with material approved by the engineer. Conduit may be abandoned in the ground. Contact the district traffic engineer to determine if any removed signal equipment needs to be returned to the district and to determine the location/time for such deliveries.

Subsection: 03.17 acceptance and inspection requirements.

Revision: Replace the first paragraph of the section with the following: See subsection 105.12. In coordination with the district traffic engineer, energize traffic control device as soon as it is fully functional and ready for inspection. After the work has been completed, conduct an operational test demonstrating that the system operates in accordance with the plans in the presence of the engineer. The department will also conduct its own tests with its own equipment before final acceptance. Ensure that the traffic control device remains operational until the division of traffic operations has provided written acceptance of the electrical work.

Subsection: 04.01 conduit

Revision: Replace the second sentence of the subsection with the following: The department will not measure conduit fittings, ground lugs, test plugs, expansion joints, and clamps for payment and will consider them incidental to this item of work.

Preformed Quadrapole Loops

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Subsection: 04.02 electrical junction box type various.

Revision: Replace the subsection with the following: the department will measure the quantity as each individual unit furnished and installed. The department will not measure additional junction boxes for greater depths than those identified in plans, aggregate (#57), backfilling, restoration of disturbed areas to the satisfaction of the engineer, geotextile fabric, concrete, hot dipped galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for payment and will consider them incidental to this item of work.

Subsection: 04.03 trenching and backfilling.

Revision: Replace the second sentence with the following: the department will not measure excavation, backfilling, underground utility warning tape, and the restoration of disturbed areas to original condition for payment and will consider them incidental to this item of work.

Subsection: 04.05 loop wire.

Revision: Replace the second sentence of the subsection with the following: The department will not measure splice boots, cable rings, and any other necessary hardware for payment and will consider them incidental to this item of work.

Subsection: 04.06 cable.

Revision: Replace the second sentence of the subsection with the following: The department will not measure splice boots, cable rings, and any other hardware for payment and will consider them incidental to this item of work.

Subsection: 04.15 loop saw slot and fill.

Revision: Replace the second sentence of the subsection with the following: The department will not measure sawing, cleaning, filling induction loop saw slot, loop sealant, backer rod, drilling hole for conduit, and grout for payment and will consider them incidental to this item of work.

Subsection: 04.30 bore and jack conduit.

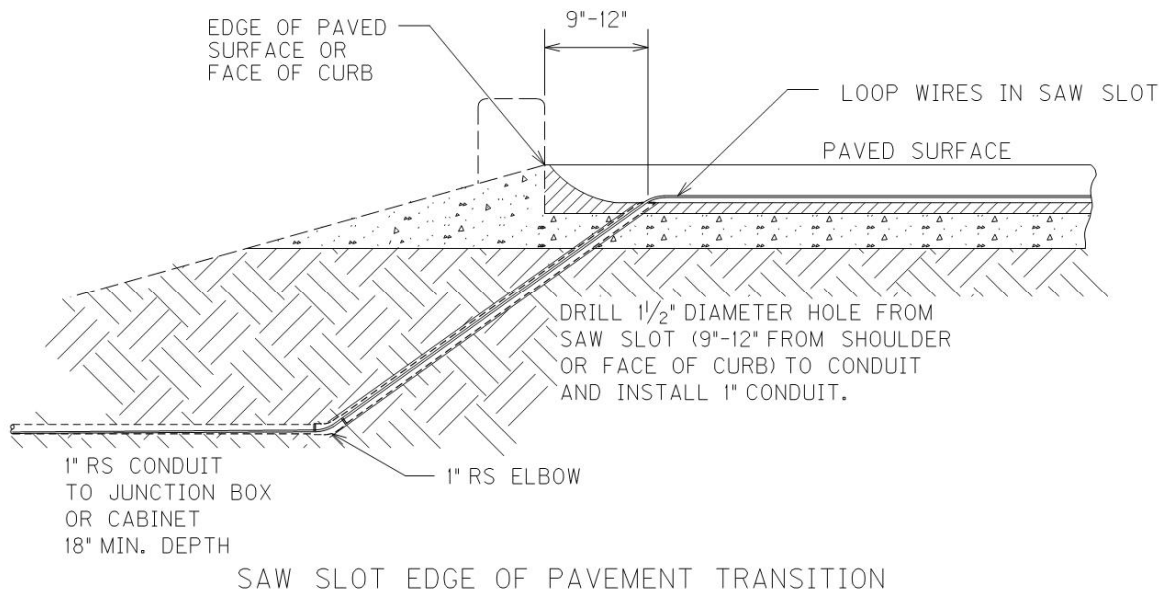
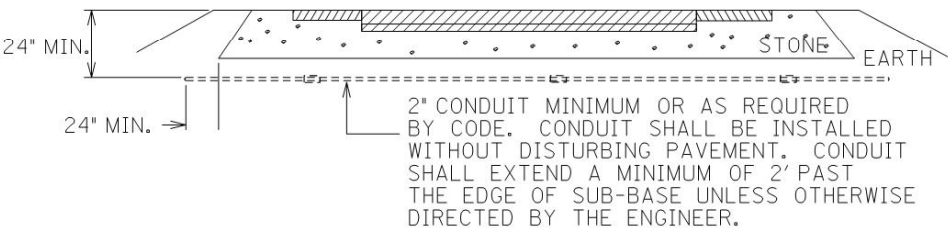
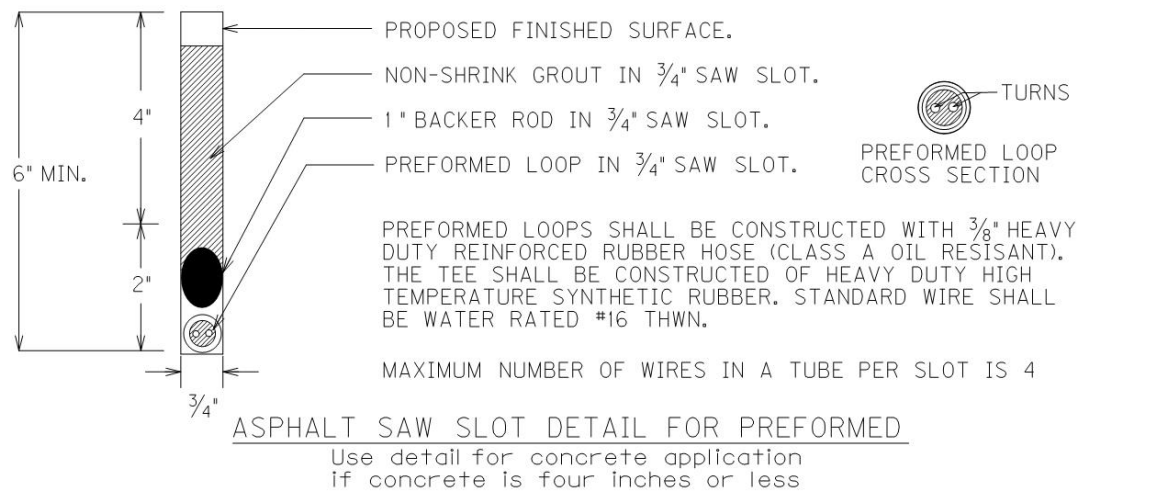
Revision: Replace the paragraph with the following: The department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway.

Construction and measurement notes that are contrary to section 716:

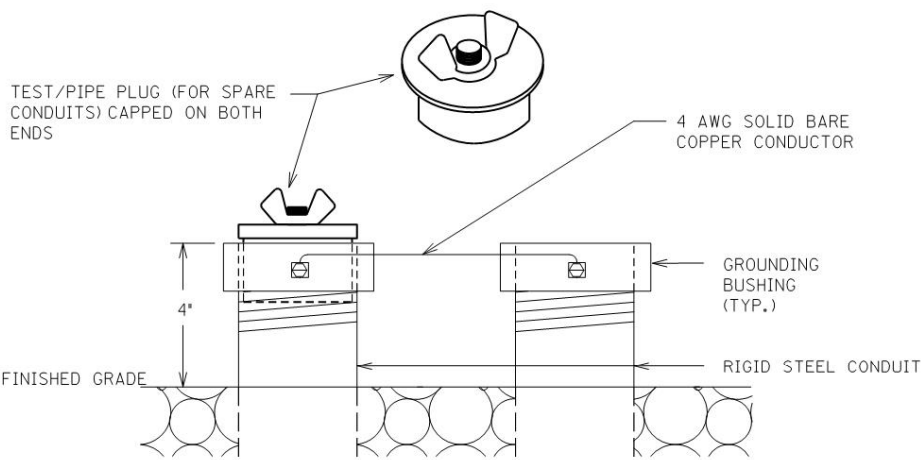
Subsection: 03.04 conduit installation.

Revision: Add the following to the part to the subsection: G) bore and jack. Construction methods shall be in accordance with subsections 706.03.02, paragraphs 1, 2 and 4.

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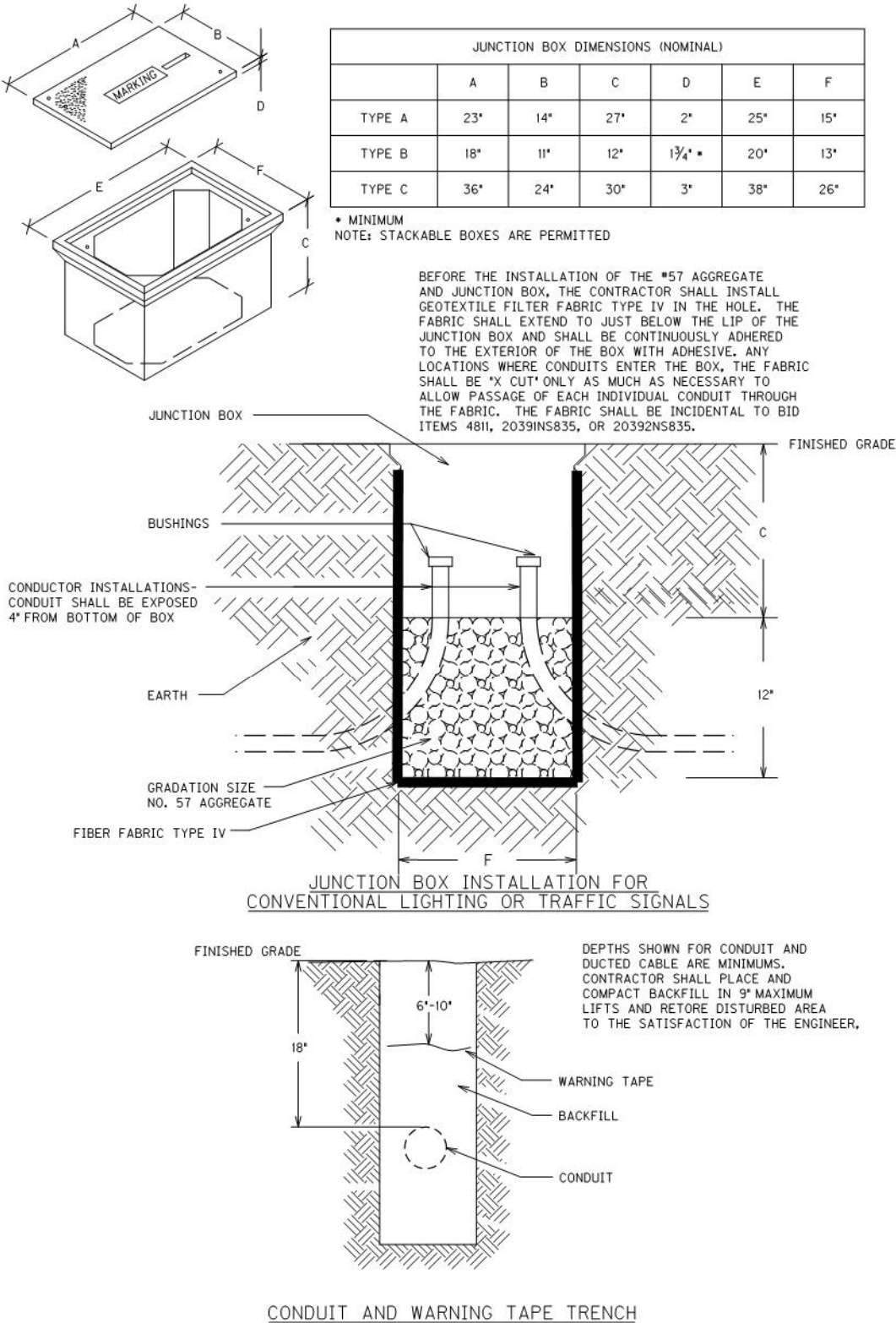


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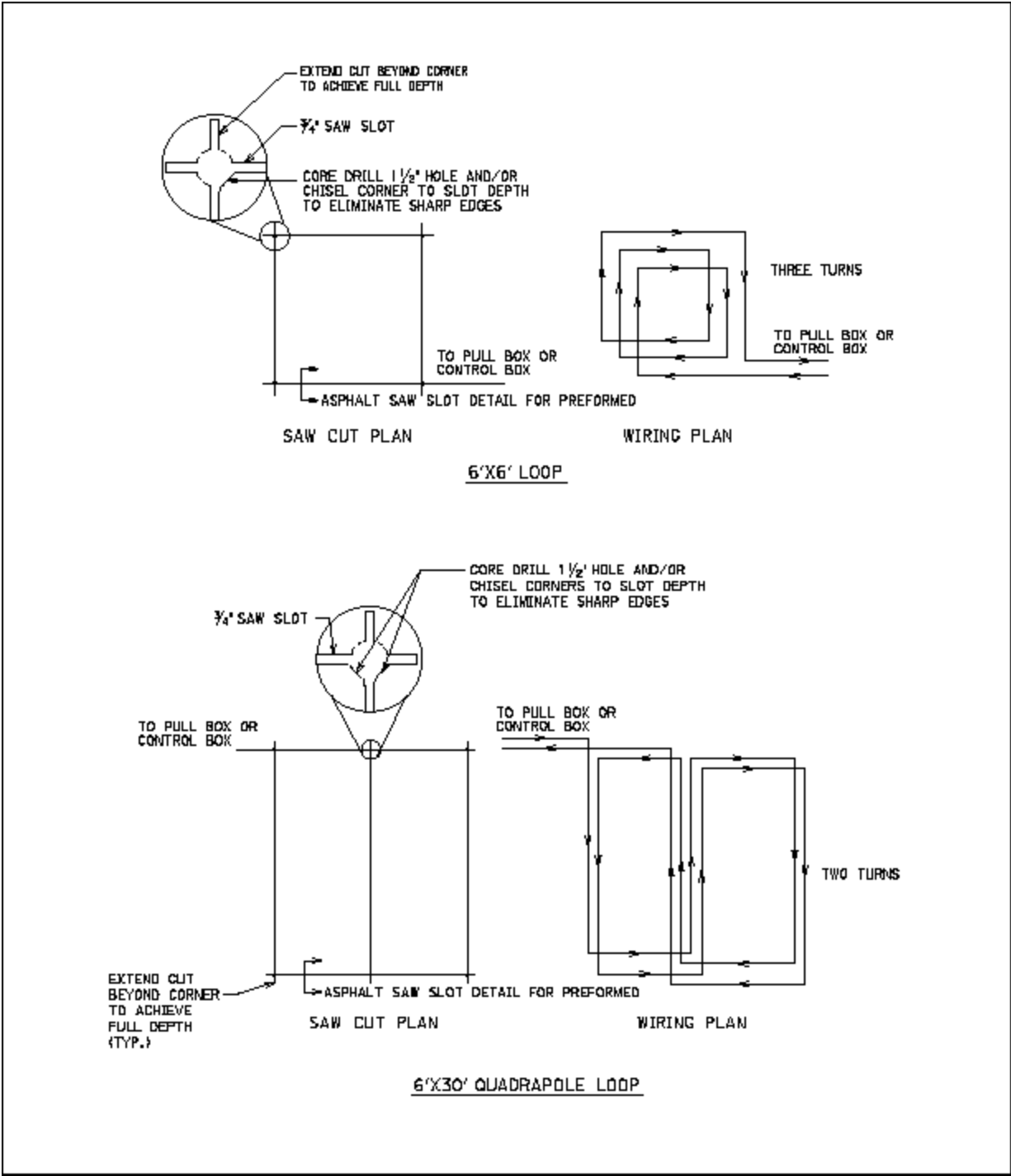


TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL

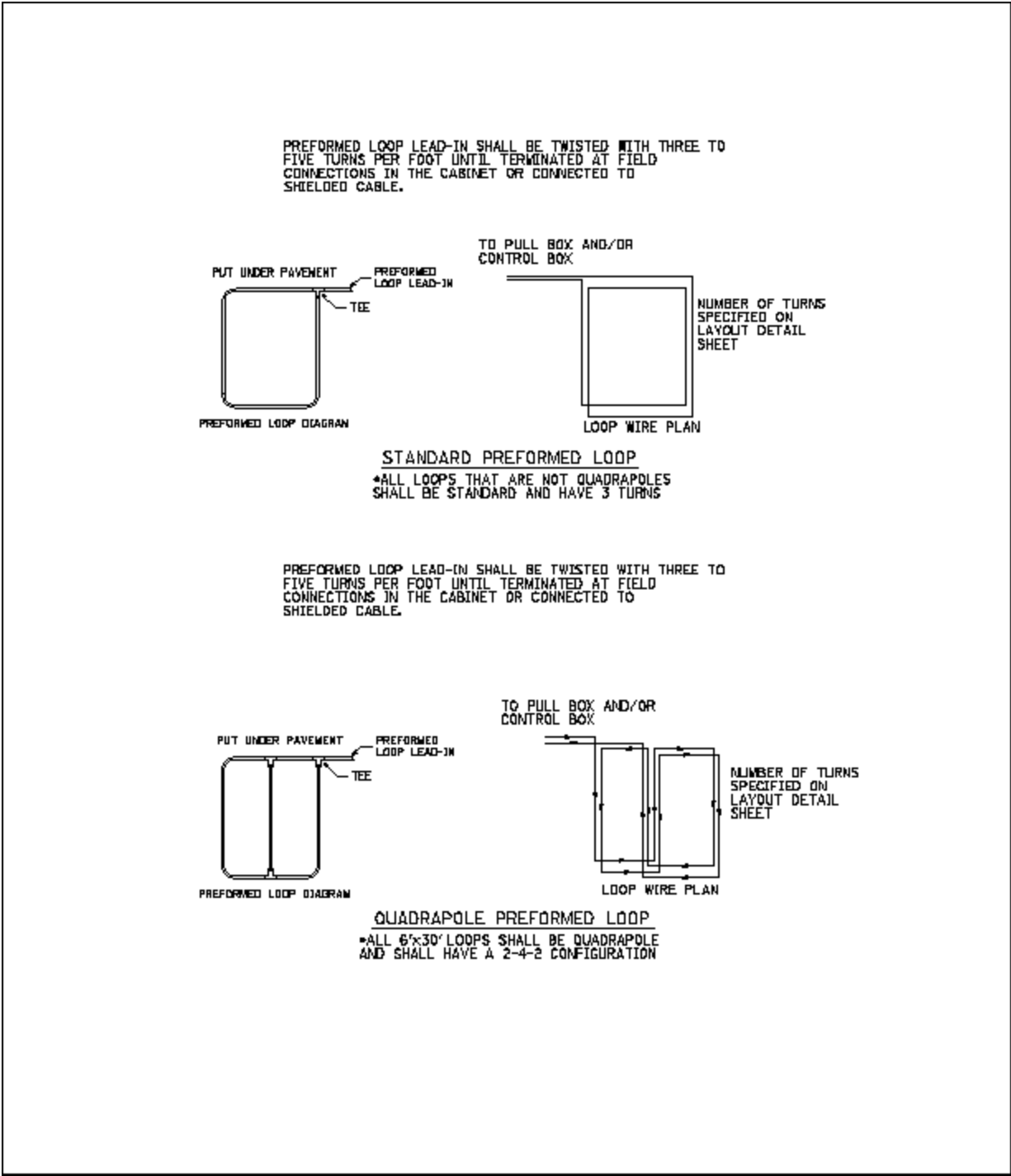
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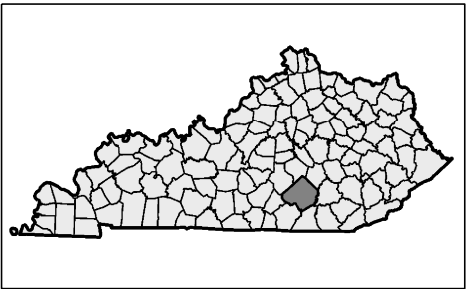
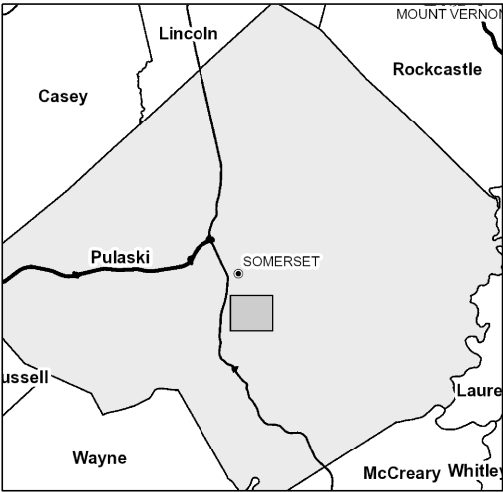
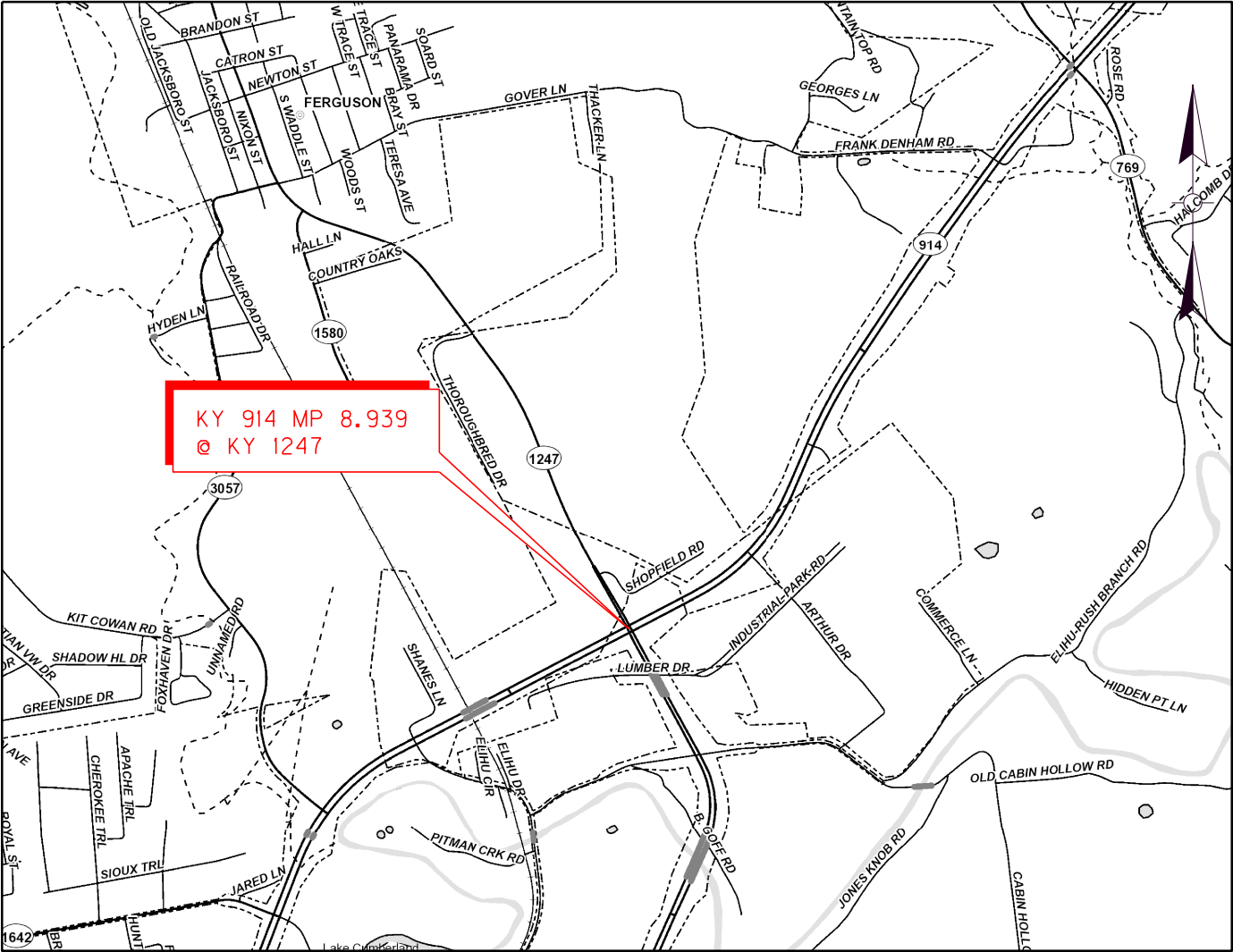


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COUNTY OF	ITEM NO.
PULASKI	8-9013.10

PULASKI COUNTY
Intersection Improvements at
KY 914 and KY 1247



COUNTY OF	ITEM NO.
PULASKI	8-9013.10

GENERAL SUMMARY - KY 914 (MP 8.939) @ KY 1247			
ITEM	DESCRIPTION	UNIT	QUANTITY
2569	DEMOBILIZATION	LS	1
2650	MAINTAIN & CONTROL TRAFFIC (KY 914 @ KY 1247)	LS	1
4844	CABLE-NO. 14/5C	LF	750
20188NS835	INSTALL LED SIGNAL-3 SECTION	EACH	11
24955ED	REMOVE SIGNAL EQUIPMENT (KY 914 @ KY 1247)	EACH	1

COUNTY OF	ITEM NO.
PULASKI	8-9013.10

INSTALL SUPPLEMENTAL SIGNAL HEADS			
Station*	Offset*	Facing Traffic	Description
471+25	93' RT	EB	3-Section LED signal head with reflective backplate
472+72	84' RT	NB	3-Section LED signal head with reflective backplate
472+61	71' LT	WB	3-Section LED signal head with reflective backplate
471+32	82' LT	SB	3-Section LED signal head with reflective backplate

*Station and Offset are approximate and are for information only. Mount signal heads on existing steel strain poles.

REPLACE EXISTING SIGNAL HEADS - ADD REFLECTIVE BACKPLATES			
Station**	Offset**	Facing Traffic	Description
471+29.2	2.4' LT	WB	3-Section LED signal head with reflective backplate
471+29.5	14.4' LT	WB	3-Section LED signal head with reflective backplate
472+67.9	27.4' RT	EB	3-Section LED signal head with reflective backplate
472+68.8	37.8' RT	EB	3-Section LED signal head with reflective backplate
472+67.0	13.8' RT	EB	3-Section LED signal head with reflective backplate
471+29.9	26.4' LT	WB	3-Section LED signal head with reflective backplate
471+30.5	38.4' LT	WB	3-Section LED signal head with reflective backplate

**Station and Offset are approximate and are for information only. Align signal heads with existing span wires and driving lanes.

Item No.	Description	Unit	Quantity
20188NS835	INSTALL LED SIGNAL-3 SECTION	EACH	11

COUNTY OF	ITEM NO.
PULASKI	8-9013.10

Replacement Signal Heads for: KY 914 @ KY 1247

Signal Heads For NB KY 1247

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3-Section with Backplate	1		1		1	
Totals	1	0	1	0	1	0

Signal Heads For SB KY 1247

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3-Section with Backplate	1		1		1	
Totals	1	0	1	0	1	0

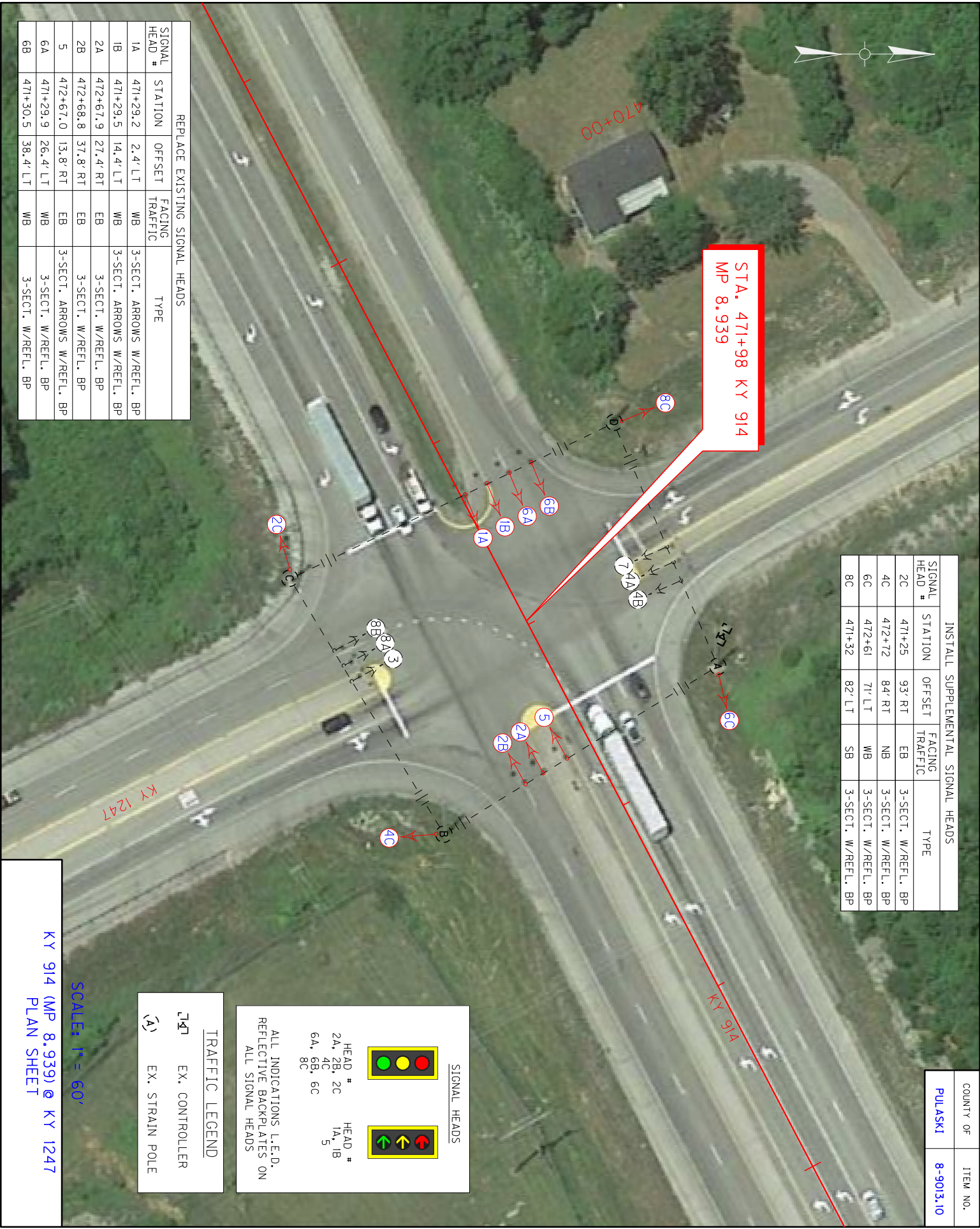
Signal Heads For EB KY 914

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3-Section with Backplate		1		1		1
3-Section with Backplate	1		1		1	
3-Section with Backplate	1		1		1	
3-Section with Backplate	1		1		1	
Totals	3	1	3	1	3	1

Signal Heads For WB KY 914

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3-Section with Backplate		1		1		1
3-Section with Backplate		1		1		1
3-Section with Backplate	1		1		1	
3-Section with Backplate	1		1		1	
3-Section with Backplate	1		1		1	
Totals	3	2	3	2	3	2

KY 914 (MP 8.939) @ KY 1247
SIGNAL HEAD REPLACEMENT



PROJECT MATERIALS RELEASE FORM
FOR SIGNAL AND LIGHTING

Note: Email form with signatures to KYTC's warehouse (kim.stamper@ky.gov) at least two (2) days prior to arrival for pickup. Ensure Contractor's delivery driver has a copy of form with signatures. Failure to do either may result in long delays or refusal to distribute materials upon arrival.

Item Number: 8-9013.10
County: Pulaski
Description: Intersection of KY 914 and KY 1247

Signals		
11	T-02-0009	Siemens 3 Section Signal
11	T-02-0032	Siemen 3 section backplate
3	T-02-0300	LED Module 12" red arrow
3	T-02-0310	LED Module 12" yellow arrow
3	T-02-0320	LED Module 12" green arrow
8	T-02-0330	LED Module 12" red ball
8	T-02-0340	LED Module 12" yellow ball
8	T-02-0350	LED Module 12" green ball

Special items		
4	T-02-0640	Mast arm mount signal bracket (3 section)

REQUIRED

Electrical Contractor Name

Electrical Contractor Supervisor

Project Engineer

Project Engineer attests that the mentioned contractor is the actual electrical contractor on this project

Signature of Project Engineer or Designee

Contact number for Supervisor

Contact number for Project Engineer

SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites
01/02/2012

SPECIAL NOTES FOR GUARDRAIL

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications.

Furnish all equipment, labor, materials, and incidentals for the following work items:

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (4) Delineators for guardrail; (5) Maintain and control traffic; and (6) all other work specified as part of this contract.

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Guardrail. Furnish guardrail system components according to section 814 and the Standard and Sepia Drawings; except use steel posts only, no alternates.

C. Delineators for Guardrail. Delineators for Guardrail. Furnish Delineators for Guardrail according to the Sepia Drawings.

D. Erosion Control. See Special Notes for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Remove existing guardrail system including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system according to Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way at sites obtained by the Contractor at no additional cost to the Department. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, adding and compacting of suitable materials on the

Guardrail

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existing shoulders to provide proper template or foundation for the guardrail; filling voids left as the result of removing existing guardrail and guard posts with dry sand; temporary pollution and erosion control; disposal, of excess and waste materials and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the Engineer.

C. Guardrail. Except as specified herein, construct guardrail system according to Section 719 and the Standard and Sepia Drawings. Locations listed on the summary and/or shown on the drawings are approximate only. The Engineer will determine the exact termini for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

Erect guardrail to the lines and grades shown on current Standard and Sepia Drawings or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags. Support cantilevered terminal sections with an additional post.

When removing existing guardrail and installing new guardrail, do not leave the blunt end exposed where it would be hazardous to the public. When it is not practical to complete the construction of the guardrail and the permanent end treatments and terminal sections first, provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

D. Delineators for Guardrail. Install delineators for guardrail according to the Standard and Sepia Drawings.

E. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.

F. Coordination with Utility Companies. Locate all underground, above ground and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of guardrail operations at no additional cost to the Department.

G. Right of Way Limits. The Department has not established exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements,

Guardrail
Page 3 of 3

and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

H. Disposal of Waste. Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See Special; Note for Waste and Borrow.

I. Final Dressing, Clean Up, and Seeding and Protection. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas according to the Special Notes for Erosion Control.

J. Erosion Control. See Special Notes for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site preparation. Other than the bid items listed, the Department will not measure Site Preparation for separate payment but shall be incidental to Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections as applicable.

C. Guardrail. See Section 719.04.

D. Delineators for Guardrail. See the Sepia Drawing.

E. Erosion Control. See Special Notes for Erosion Control.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Guardrail. See Section 719.05.

C. Delineators for Guardrail. See the Sepia Drawing.

D. Erosion Control. See Special Notes for Erosion Control.

SPECIAL NOTE FOR ASPHALT MILLING AND TEXTURING

Begin paving operations within **48 hours** of commencement of the milling operation. Continue paving operations continuously until completed. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations are begun.

Take possession of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

1-3520 48 hours Contractor keeps millings
01/2/2012

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN FD04 100 1247 003-005

TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the current Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the project will be in compliance with the appropriate Standard Drawings. (NOTE: Any lane closures used on the project shall be done utilizing traffic drums with a maximum spacing of 25 ft.) Do NOT use cones for lane closures or shoulder closures.

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition, at the beginning of the work and maintained in like new condition until completion of the work. Traffic control devices used on this project and the Temporary Traffic Control Plan shall conform to the current edition of the *Manual on Uniform Traffic Control Devices*.

Contractor will be responsible for the relocation of traffic signals to accommodate the changing traffic control scheme as directed by the Project Engineer for the duration of the project. A "Relocate Signal Head" bid item has been provided in the Traffic Loop Summary details. Note: regardless of the number of times an individual signal head is relocated, relocation will only be paid for once.

PROJECT PHASING & CONSTRUCTION PROCEDURES

Maintain a minimum of one traffic lane (mainline) in each direction at all times during construction. The clear lane width shall be 12 Feet. Maintain one lane of traffic during construction in accordance with Standard Drawing No. TTC-115-02, and the attached detail drawing.

CONSTRUCTION PHASING

PHASE 1 – EXISTING ASPHALT PAVEMENT REMOVAL AND CONSTRUCTION OF NEW JPC PAVEMENT ON SOUTH BOUND SHOULDER AND THRU LANE.

Construct temporary entrance for driveway within the project limits. Use DGA to create entrance and remove, if needed at end of project. Ensure proper drainage is restored as directed by the Project Engineer. Channelize traffic in Northbound and Southbound directions using barrels to designated lanes in Typical Sections. (NOTE: Opposing traffic will be delineated by barrels in this phase. Place barrels no more than 25ft apart.) Relocate Signal Heads to align with Southbound lane. Remove existing asphalt and construct new JPC Pavement on the Southbound shoulder and thru lane. Excavate material to sufficient depth (min. 27") for placement of sub-base material. Place edge drain system as Engineer directs. Grade edge drains into existing ditch lines to maintain

positive drainage. Place sub-base material, preformed signal loop, and install conduit for traffic signal loop tail. Consult with Project Engineer for revised stop bar and loop locations. Construct new JPC Pavement.

PHASE 2 – EXISTING ASPHALT PAVEMENT REMOVAL AND CONSTRUCTION OF NEW JPC PAVEMENT ON MEDIAN AND SOUTHBOUND LEFT TURN LANE.

Switch Southbound traffic onto new JPC Pavement. (**NOTE:** Work zone will be delineated by barrels in this phase. Place Barrels no more than 25ft apart). Relocate Signal Heads to align with new Southbound lane. Excavate and remove existing asphalt and other unclassified material to sufficient depth (min. 27”) for placement of sub-base material. Place sub-base material, preformed signal loop, and construct JPC Pavement.

PHASE 3 - EXISTING ASPHALT PAVEMENT REMOVAL AND CONSTRUCTION OF NEW JPC PAVEMENT ON NOUTHBOUND SHOULDER AND THRU LANE. EXISTING ASPHALT PAVEMENT REMOVAL AND CONSTRUCTION OF NEW DEPTH ASPHALT SHOULDERS.

Channelize traffic in Northbound and Southbound directions using barrels to designated lanes in typical sections. (**NOTE:** Opposing traffic will be delineated by barrels in this phase. Place Barrels no more than 25ft apart.) Northbound shoulders at both approaches should be barreled off for shoulder reconstruction. Mill existing Asphalt Pavement to specified depth in the typical sections. Remove Existing Asphalt Pavement of the Northbound thru lane and shoulder within JPC Limits. Excavate and remove existing asphalt pavement and other unclassified material to sufficient depth (min. 27”) for placement of sub base material. Place edge drain system as Engineer directs and outlet to drain to existing ditch line. Place sub base material and construct JPC pavement. Place asphalt base in shoulder areas to the specified depth. Wedge base up to thru lane surface on the South approach of KY1247. Reinstall new guardrail (if removal required) before shoulder is reopened. Inspect and certify edge drain system.

PHASE 4 – SIGNAL HEAD WORK AND ASPHALT RESURFACING AND PERMANENT STRIPING AND PAVEMENT MARKINGS

Traffic on new JPC Pavement should be in final configuration. Signal Heads should be installed and aligned for final configuration. After all JPC Pavement work has been completed, mill and place asphalt surface on KY1247 South approach. Traffic Loops shall be installed before surface is placed. Mill edge key if needed at the end of JPC Concrete and place surface overlay full width on the North Approach of KY1247. After all JPC pavement and Asphalt work has been completed place permanent pavement striping in proposed configuration on new Asphalt Surface and JPC Pavement. In addition to permanent striping, place all pavement markings within project limits. Install new signal heads for KY914 approaches in this phase.

No work will be allowed on the following dates:

Labor Day Weekend	Friday, September 2, 2022 – Monday, September 5, 2022
Thanksgiving Holiday	Thursday, November 24, 2022 – Monday, November 28, 2022
Christmas Holiday	Friday, December 23, 2022 – Monday, December 26, 2022
New Year's Holiday	Friday, December 30, 2022 – Monday, January 2, 2022
Memorial Day Weekend	Friday, May 27, 2022 – Tuesday, May 31, 2022
Independence Day Weekend	Friday, July 1, 2022 – Tuesday, July 5, 2022
Power Cruise Mustang Show	Friday, August 26, 2022 – Monday, August 29, 2022

Night work will be allowed on this project. The method of lighting for night work will require written approval from the Engineer prior to its use.

Locations listed in the proposal or shown on sketch map are approximate only; the Engineer will determine exact locations at time of construction.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Lane closures must be monitored 24 hours a day by the contractor in order to provide safe travel for the general public and to ensure protection of the work zone.

SIGNS

Contrary to Section 112.04.02 and 112.04.03, Low Shoulder Signs will not be measured for payment, but shall be incidental to Maintain and Control Traffic. Contrary to section 112.04.02, only long term construction signs (signs intended to be continuously in place for more than 3 days) will be measured for payment; short term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but shall be incidental to Maintain and Control Traffic.

Individual construction signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

Relocate and reset or cover existing permanent signs as required by the work. Obtain the Engineer's approval before removing or covering an existing sign. The Department will not measure relocating and resetting or covering existing permanent signs, but shall be incidental to Maintain and Control Traffic.

BARRICADES

Barricades used in lieu of barrels and cones for channelization or delineation will be incidental to Maintain and Control Traffic according to Section 112.04.01. Barricades used to protect pavement removal areas will be bid as each according to Section 112.04.04.

Individual barricades will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged barricades or barricades directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The locations designated may vary as the work progresses. The messages required to be provided shall be designated by the Engineer. In the event of damage or mechanical/electrical failure, the Contractor shall repair or replace the Changeable Message Sign within 24 hours. The Department will measure for payment the maximum number of changeable message signs in concurrent use at the same time on a single day on all sections of the contract. Individual changeable message signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged changeable message signs directed by the Engineer to be replaced due to poor condition or readability will not be measured for payment.

ARROW PANEL

Use arrow panels as shown on the Standard Drawings or as directed by the Engineer. The Department will measure for payment the maximum number of arrow panels in concurrent use at the same time on a single day on all sections of the contract. Individual arrow panels will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged arrow panels directed by the Engineer to be replaced due to poor condition or readability will not be measured for payment. Arrow panels will remain the property of the Contractor after construction is complete.

TRAFFIC COORDINATOR

Designate an employee to be traffic coordinator conforming to the requirements of Section 112.03.12. Designate an employee to serve as Traffic Coordinator. The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's

operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times. During any period when a lane closure is in place, the Traffic Coordinator will arrange for personnel to be present on the project at all times to inspect the traffic control, maintain the signing and devices, and relocate variable message boards as queue lengths change. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents.

TEMPORARY ENTRANCES

The Contractor will not be required to provide continuous access to farms, single family, duplex, or triplex residential properties during working hours; however, provide reasonable egress and ingress to each such property when actual operations are not in progress at that location. The time during which a farm or residential entrance is blocked shall be the minimum length of time required for actual operations, shall not be extended for the Contractor's convenience, and in no case shall exceed six (6) hours. Notify all residents twenty-four hours in advance of any driveway or entrance closings and make any accommodations necessary to meet the access needs of disabled residents.

Except as allowed by the Phasing as specified above, maintain direct access to all side streets and roads, schools, churches, commercial properties and apartments or apartment complexes of four or more units at all times.

Payment will be allowed at the unit price bid for all asphalt materials required to construct and maintain any temporary entrances which may be necessary to provide temporary access; however, no direct payment will be allowed for aggregates, excavation and/or embankment needed. The Engineer will determine the type of surfacing material, asphalt or aggregate, to be used at each entrance.

TRAFFIC LOOP INSTALLATION

All items required for lane closures related to this item of work shall be considered incidental to bid item "Maintain and Control Traffic". Install Traffic signal loops as per special notes. The Contractor shall coordinate the placement of the traffic loops with the District Traffic Engineer.

PAVEMENT MARKINGS

Contrary to Section 112.03.10, remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use during night time hours, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses, but shall be incidental to "Maintain and Control Traffic".

Place temporary and permanent striping according to Sections 112 and 748, except that:

Temporary or Permanent striping or tape shall be in place before a lane is opened to traffic.

Any pavement striping that conflicts with the traffic control phasing must be removed and is incidental to Maintain and Control Traffic.

If the Contractor's operations or phasing requires temporary markings that must be subsequently removed from the final surface course, Temporary Removable Tape shall be used. This removable tape will be measured separately.

PAVEMENT EDGE DROP-OFFS

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation shall not have an elevation difference greater than 1½". Warning signs (MUTCD W8-9 or W8-9A, or W8-11) shall be placed in advance of and at 1500' intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required. All transverse transitions between newly surfaced pavement and the existing pavement areas that traffic may cross shall be wedged with asphalt mixture for leveling and wedging. Remove wedges prior to placement of the final surface course.

Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

Less than 2" – No protection required.

2" to 4" – Place plastic drums, vertical panels, or barricades every 50 feet. Cones may be used in place of plastic drums, panels, and barricades during daylight working hours. Wedge with DGA or asphalt mixtures with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

4 inches and greater –Protect with a lane or shoulder closure using drums or barricades; cones will not be allowed for lane or shoulder closures for drop-offs 4 inches or greater. Place drums or barricades with spacing **not to exceed 25 feet**. Place Type III Barricades facing oncoming traffic at each drop off. If for any reason traffic must be maintained less than 5 feet from the drop off, wedge with crushed stone with 3:1 or flatter slope when work is not actively in progress in the drop-off area. Once excavation begins, work continuously to construct crushed stone backfill and DGA base to eliminate the drop-off. Drop-offs greater than 4 inches within 5 feet of traffic will not be allowed during non-working hours.

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

The following policy is based upon current Changeable Message Signs (CMS) standards and practice from many sources, including the Federal Highway Administration (FHWA), other State Departments of Transportation, and Traffic Safety Associations. It is understood that each CMS installation or use requires individual consideration due to the specific location or purpose. However, there will be elements that are constant in nearly all applications. Accordingly these recommended guidelines bring a level of uniformity, while still being open to regional experience and engineering judgment.

Application

The primary purpose of CMS is to advise the driver of unexpected traffic and routing situations. Examples of applications where CMS can be effective include:

- Closures (road, lane, bridge, ramp, shoulder, interstate)
- Changes in alignment or surface conditions
- Significant delays, congestion
- Construction/maintenance activities (delays, future activities)
- Detours/alternative routes
- Special events with traffic and safety implications
- Crash/incidents
- Vehicle restrictions (width, height, weight, flammable)
- Advance notice of new traffic control devices
- Real-time traffic conditions (must be kept up to date)
- Weather /driving conditions, environmental conditions, Roadway Weather Information Systems
- Emergency Situations
- Referral to Highway Advisory Radio (if available)
- Messages as approved by the County Engineer's Office

CMS should not be used for:

- Replacement of static signs (e.g. road work ahead), regulatory signage (e.g. speed limits), pavement markings, standard traffic control devices, conventional warning or guide signs.
- Replacement of lighted arrow board
- Advertising (Don't advertise the event unless clarifying "action" to be taken by driver – e.g. Speedway traffic next exit)
- Generic messages
- Test messages (portable signs only)
- Describe recurrent congestion (e.g. rush hour)
- Public service announcements (not traffic related)

Messages

Basic principles that are important to providing proper messages and insuring the proper operation of a CMS are:

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- Nor more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

Placement of the CMS is important to insure that the signs is visible to the driver and provides ample time to take any necessary action. Some of the following principles may only be applicable to controlled access roadways. The basic principles of placement for a CMS are:

- When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- Normally place on right side of roadway; but should be placed closest to the affected lane so that either side is acceptable
- Signs should not be dual mounted (one on each side of roadway facing same direction)
- Point trailer hitch downstream
- Secure to immovable object to prevent thief (if necessary)
- Do not place in sags or just beyond crest
- Check for reflection of sun to prevent the blinding of motorist
- Should be turned ~3 degrees outward from perpendicular to the edge of pavement
- Bottom of sign should be 7 feet above the elevation of edge of roadway
- Should be removed when not in use
-

Standard Abbreviations

The following is a list of standard abbreviations to be used on CMS.

<u>Word</u>	<u>Abbrev.</u>	<u>Example</u>
Access	ACCS	ACCIDENT AHEAD/USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ALL TRAF EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/EXPECT DELAYS
Hour	HR	ACCIDENT ON AA HWY/2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/DETOUR EXIT 20
Lane	LN	LN CLOSED/MERGE LEFT
Left	LFT	LANE CLOSED/MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/SLOW
Major	MAJ	MAJ DELWAYS I75/USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY

Minutes	MIN	ACCIDENT 3 MI/30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/DETOUR EXIT 60
Prepare	PREP	ACCIDENT 3 MIL/PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/POSSIBLE DELAYS
Route	RTE	MAJ DELAYS I75/USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD
Street	ST	MAIN ST CLOSED/USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/POSSIBLE DELAYS

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NO USE THESE ABBREVIATIONS.

<u>Abbrev.</u>	<u>Intended Word</u>	<u>Word Erroneously Given</u>
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (merge)
LOC	Local	Location
LT	Light (traffic)	Left
PARK	Parking	Park
POLL	Pollution (index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
TEMP	Temporary	Temperature
WRNG	Warning	Wrong

TYPICAL MESSAGES

The following is a list of typical messages used on CMS. The list consists of the reason or problem that you want the driver to be aware of and the action that you want the driver to take.

<u>Reason/Problem</u>	Action
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD	KEEP LEFT
DENSE FOG	KEEP RIGHT
DISABLED/VEHICLE	MERGE XX MILES
EMER/VEHICLES/ONLY	MERGE LEFT
EVENT PARKING	MERGE RIGHT
EXIT XX CLOSED	ONE-WAY TRAFFIC
FLAGGER XX MILES	PASS TO LEFT
FOG XX MILES	PASS TO RIGHT
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
NO PASSING	
NO SHOULDER	
ONE LANE BRIDGE	
PEOPLE CROSSING	
RAMP CLOSED	
RAMP (SLIPPERY, ICE, ETC.)	
RIGHT LANE CLOSED	
RIGHT LANE NARROWS	
RIGHT SHOULDER CLOSED	
ROAD CLOSED	
ROAD CLOSED XX MILES	
ROAD (SLIPPERY, ICE, ETC.)	
ROAD WORK	
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)	

ROAD WORK XX MILES
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)
NEW SIGNAL XX MILES
SLOW 1 (OR 2) - WAY TRAFFIC
SOFT SHOULDER
STALLED VEHICLES AHEAD
TRAFFIC BACKUP
TRAFFIC SLOWS
TRUCK CROSSING
TRUCKS ENTERING
TOW TRUCK AHEAD
UNEVEN LANES
WATER ON ROAD
WET PAINT
WORK ZONE XX MILES
WORKERS AHEAD

SPECIAL NOTE FOR TRAFFIC SIGNAL LOOP DETECTORS

1.0 DESCRIPTION. Be advised that there are existing traffic signal loop detectors within the construction limits of this project. Except as specified herein, perform traffic signal loop replacement in accordance with the Department's Standard/Supplemental Specifications, Special Provisions, Special Notes, and Standard/Septia Drawings, current editions and as directed by the Engineer. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for replacement of traffic signal loop installation(s) and all other work specified as part of this contract.

1.1 Pre-bid Requirements. Conform to Subsection 723.03.17

2.0 MATERIALS. Except as specified herein, furnish materials in accordance with Subsection 732.02 and Section 835. Provide for materials to be sampled and tested in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in this Special Note.

2.1 Maintain and Control Traffic. See Traffic Control Plan.

2.2 Sand. Furnish natural sand meeting the requirements of Subsection 804.04.01.

2.3 Seeding. Furnish Seed Mix Type I.

2.4 Loop Saw Slot and Fill. Furnish loop sealant, backer rod, and non-shrink grout according to the Saw Slot Detail.

2.5 Junction Boxes. Furnish junction box type B, #57 aggregate, and geotextile filter type IV according to junction box detail.

2.6 Cable No. 14/1 Pair (Lead-in). Furnish cable that is specified in Section 835. Cable shall be ran splice free. This shall include splice kits to connect to the loop wire.

2.7 Conduit. Furnish and install appropriate conduit from transitions to the roadway, junction boxes and poles. See details below.

3.0 CONSTRUCTION. Except as specified herein, install and test Traffic Signal Loop Detectors in accordance with Section 723 and the drawings.

3.1 Testing. Conform to Subsection 723.03.17 (A)

3.2 Coordination. Conform to Subsection 723.03.17 (B)

3.3 Connection. Conform to Subsection 723.03.17 (C)

3.4 Maintain and Control Traffic. See Traffic Control Plan.

3.5 Milling. Conform to Subsection 723.03.17 (F)

3.6 Loop Saw Slot and Fill. Conform to Subsection 723.03.13 (A).

Traffic Signal Loop Detectors
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3.7 Backfilling and Disturbed Areas. Conform to Subsection 723.03.11.

3.8 Removal. Conform to Subsection 723.03.16.

3.9 Property/Roadway Damage. Conform to Subsection 723.03.17 (J).

3.10 Right-of-Way Limits. Conform to Subsection 723.03.17 (K).

3.11 Utility Clearance. Conform to Subsection 716.03.01.

3.12 Control. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to permit other contractors, state forces, public utility companies, and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with each other's work will be reduced to a minimum. The Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to ensure the completion of the work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

3.13 Bore and Jack. Conform to Subsection 723.03.06 (I).

3.14 Open Cut Roadway. Conform to Subsection 723.03.06 (I).

4.0 MEASUREMENT. See Subsection 723.04 for bid item notes. Additional bid items include the following:

4.1 Loop Test. The Department will measure the quantity as each individual unit loop tested. The Department will not measure disconnection, reconnection, traffic control, re-splicing per specifications, before and after testing per note above, and any associated hardware for payment and will consider them incidental to this item of work.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities of listed items according to Subsection 723.05 in addition to the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
Conduit 1"	4792	Linear Foot
PVC Conduit – 1 ¼ inch – sch 80	24900EC	Linear Foot
PVC Conduit – 2 inch – sch 80	24901EC	Linear Foot
Conduit 2"	4795	Linear Foot
Electrical Junction Box type B	4811	Each
Loop Test	24963ED	Each
Trenching and Backfilling	4820	Linear Foot
Loop Wire	4830	Linear Foot

Traffic Signal Loop Detectors
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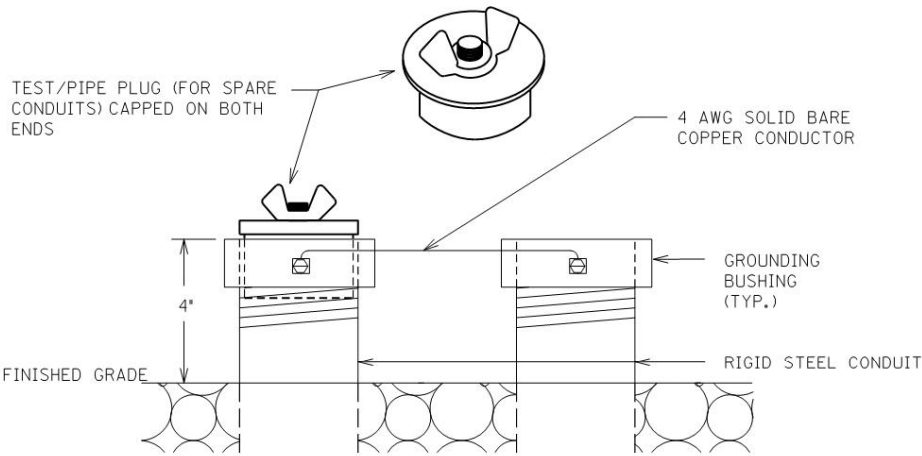
Cable-No. 14/1 Pair	4850	Linear Foot ¹
Loop Saw Slot and Fill	4895	Linear Foot ¹
Bore and Jack Conduit	21543EN	Linear Foot ³
Open Cut Roadway	4821	Linear Foot ³

The Department will consider payment as full compensation for all work required under these notes and the Standard Specifications.

Contrary to section 723:

SUBSECTION: 03.13 Loop Installation.

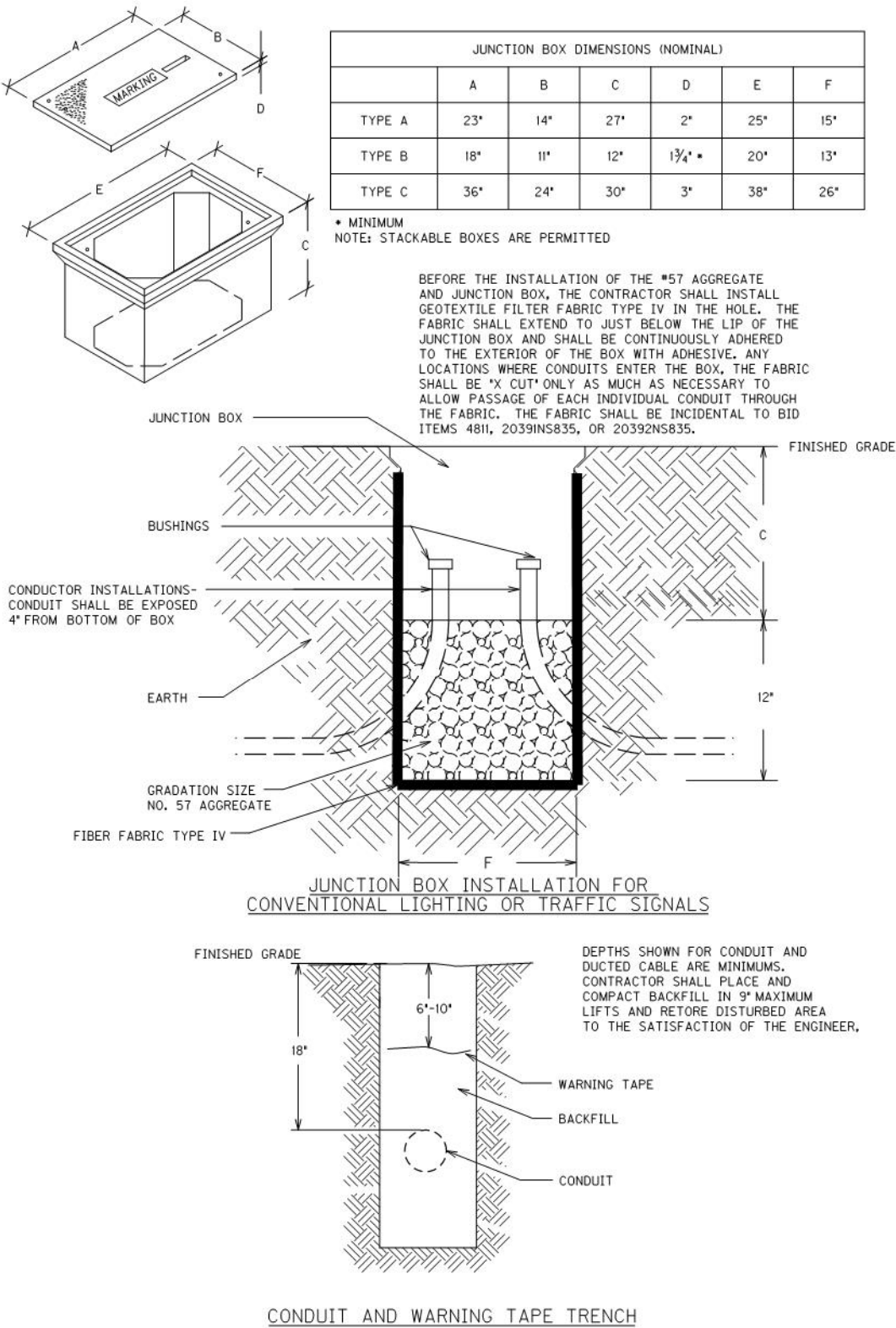
REVISION: Replace first sentence note with the following:
twist unshielded loop wire (imsa 51-7) with 3 to 5 turns from the start of homerun to the inside conduit, junction box, cabinet, or pole. Twist unshielded loop wires (imsa 51-7) with 3 to 5 turns per foot from the start of the homerun to the junction box, cabinet, or pole. Slot can be widen to .5" to .625" to help with the installation of the twisted wire.



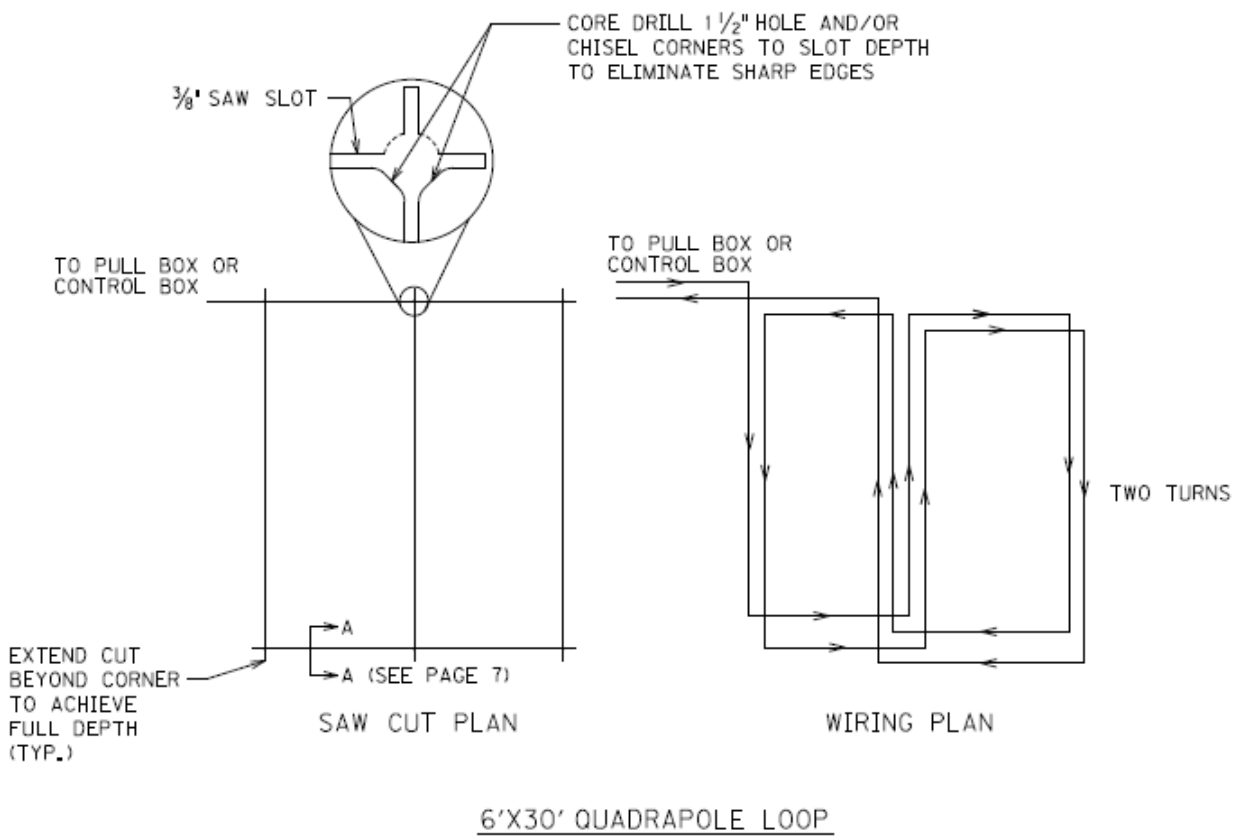
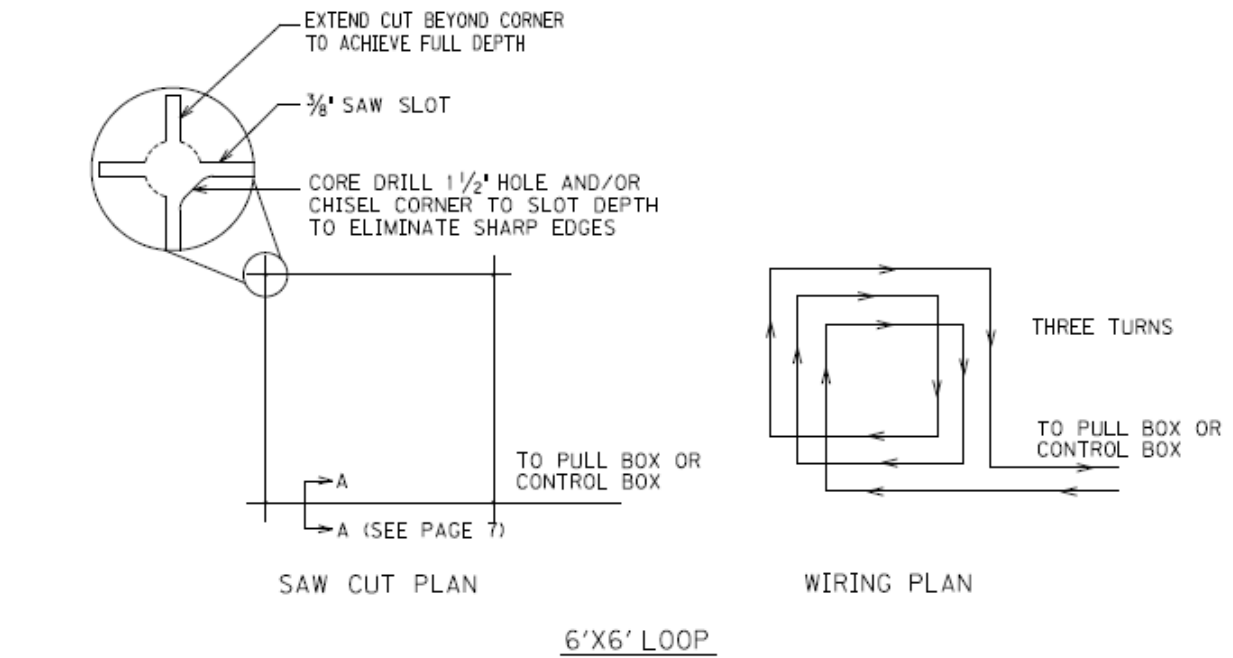
TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL

Traffic Signal Loop Detectors

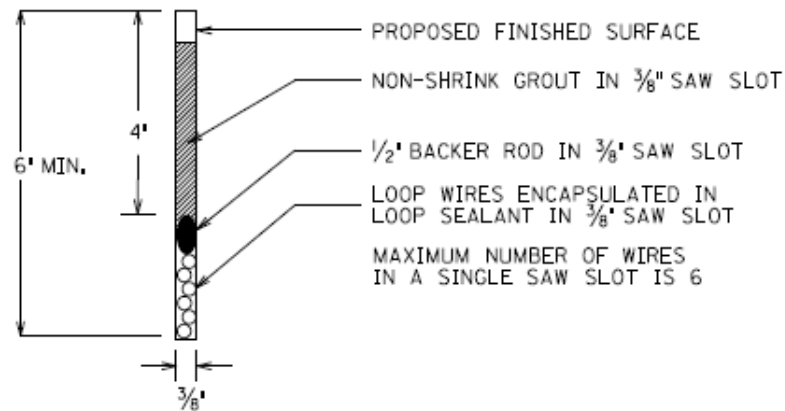
Page 4 of 8



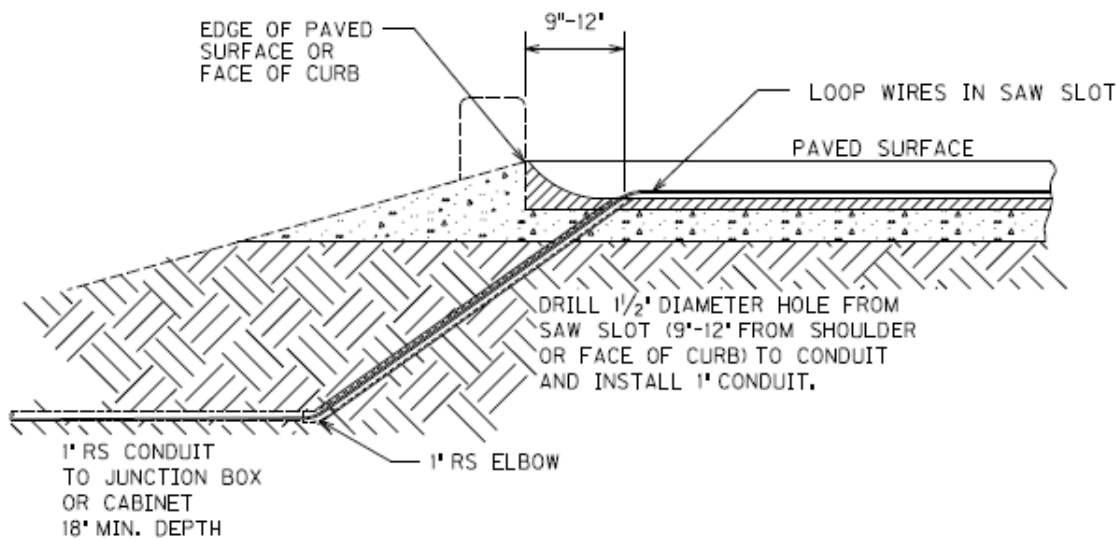
Traffic Signal Loop Detectors
Page 5 of 8



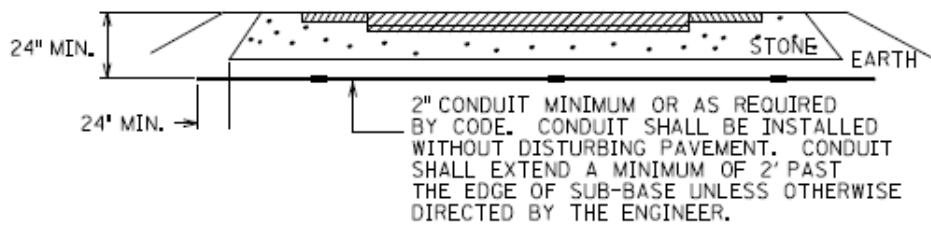
Traffic Signal Loop Detectors
Page 6 of 8



SECTION A-A (SAW SLOT DETAIL)

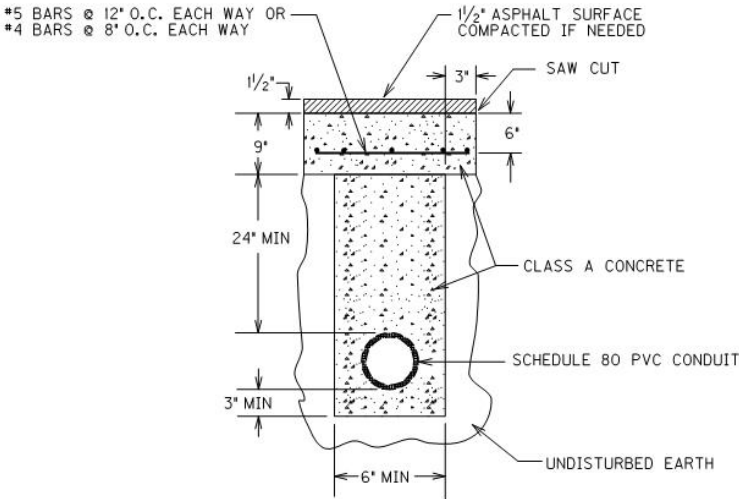


SAW SLOT EDGE OF PAVEMENT TRANSITION

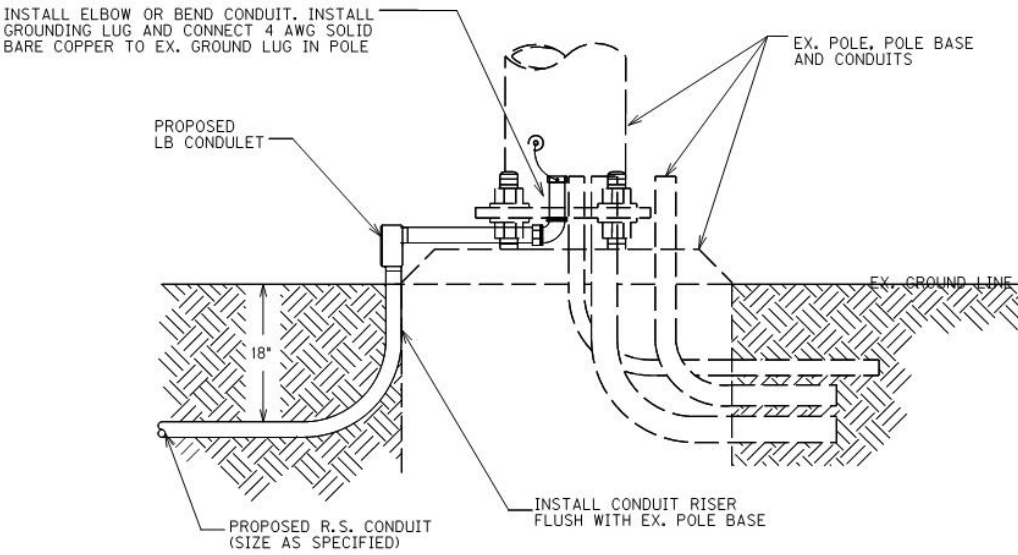


CONDUIT UNDER EXISTING PAVEMENT DETAIL

Traffic Signal Loop Detectors
Page 7 of 8



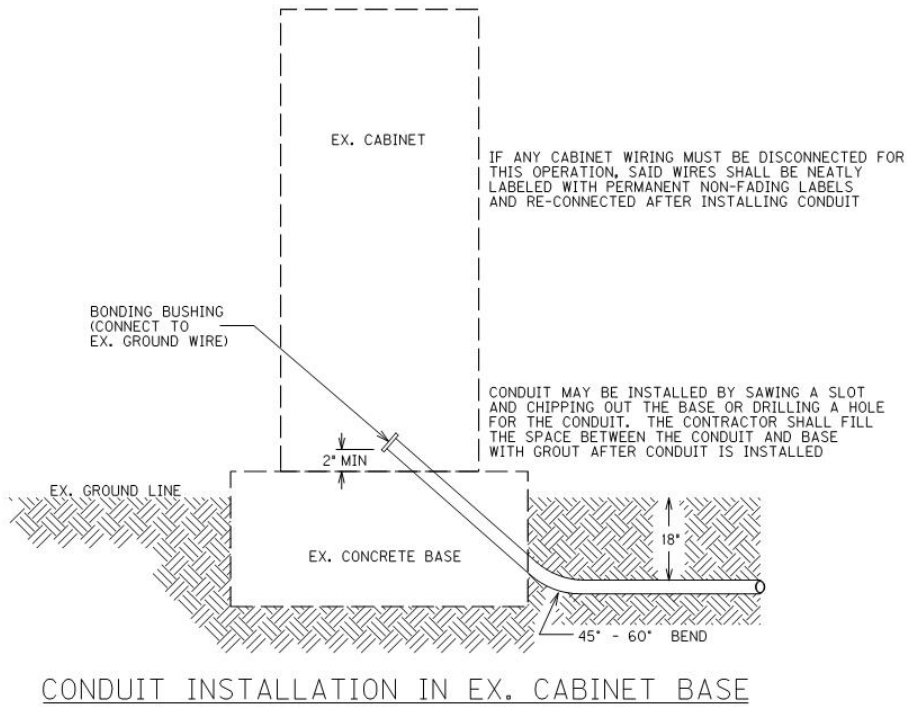
OPEN CUT PAVEMENT DETAIL



CONDUIT INSTALLATION IN EX. POLE BASE

Traffic Signal Loop Detectors

Page 8 of 8



Revised: August 10, 2021

SPECIAL NOTE FOR EROSION CONTROL

I. DESCRIPTION

Except as provided herein, perform all erosion and water pollution control work in accordance with the Department's Standard and Supplemental Specifications, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of:

(1) Developing and preparing a Best Management Practices Plan (BMP) tailored to suit the specific construction phasing for each site within the project; (2) Preparing the project site(s) for construction, including locating, furnishing, installing, and maintaining temporary and/or permanent erosion and water pollution control measures as required by the BMP prior to beginning any earth disturbing activity on the project site; (3) Clearing and grubbing and removal of all obstructions as required for construction; (4) Removing all erosion control devices when no longer needed; (5) Restoring all disturbed areas as nearly as possible to their original condition; (6) Preparing seedbeds and permanently seeding all disturbed areas; (7) Providing a Kentucky Erosion Prevention and Sediment Control Program (KEPSC) qualified inspector; and (8) Performing any other work to prevent erosion and/or water pollution as specified by this contract, required by the BMP, or as directed by the Engineer.

II. MATERIALS

Except as provided herein, furnish all materials for erosion and water pollution control work in accordance with the Department's Standard and Supplemental Specifications, and Standard and Sepia Drawings, current editions, and as directed by the Engineer.

Provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless directed otherwise by the Engineer, make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

III. CONSTRUCTION

Except as provided herein, construct all erosion and water pollution control work in accordance with the Department's Standard and Supplemental Specifications, and Standard and Sepia Drawings, current editions, and as directed by the Engineer.

Erosion Control

Page 2 of 3

Be advised, these Erosion Control Plan Notes do not constitute a BMP plan for the project. Jointly with the Engineer, prepare a site specific BMP plan for each drainage area within the project in accordance with Section 213 and the supplemental specifications. Provide a unique BMP at each project site using good engineering practices taking into account existing site conditions, the type of work to be performed, and the construction phasing, methods and techniques to be utilized to complete the work. Be responsible for all erosion prevention, sediment control, and water pollution prevention measures required by the BMP for each site. Represent and warrant compliance with the Clean Water Act (33 USC Section 1251 et seq.), the 404 Permit, the 401 Water Quality Certification, and applicable state and local government agency laws, regulations, rules, specifications, and permits. Contrary to Section 105.05, in case of discrepancy between these notes, the Standard Specifications, interim Supplemental Specifications, Special and Special Notes, Standard and Sepia Drawings, and such state and local government agency requirements, adhere to the most restrictive requirement.

Conduct operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads to the minimum required to perform the work. Preserve existing vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a stream.

Provide for erosion control measures to be in place and functioning prior to any earth disturbance within a drainage area. Compute the volume and size of silt control devices necessary to control sediment during each phase of construction. Remove sediment from silt traps before they become a maximum of ½ full. Maintain silt fence by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated, or when directed by the Engineer. Properly dispose of all materials trapped by erosion control devices at approved sites off the right of way obtained by the Contractor at no additional cost to the Department (See Special Note for Waste and Borrow).

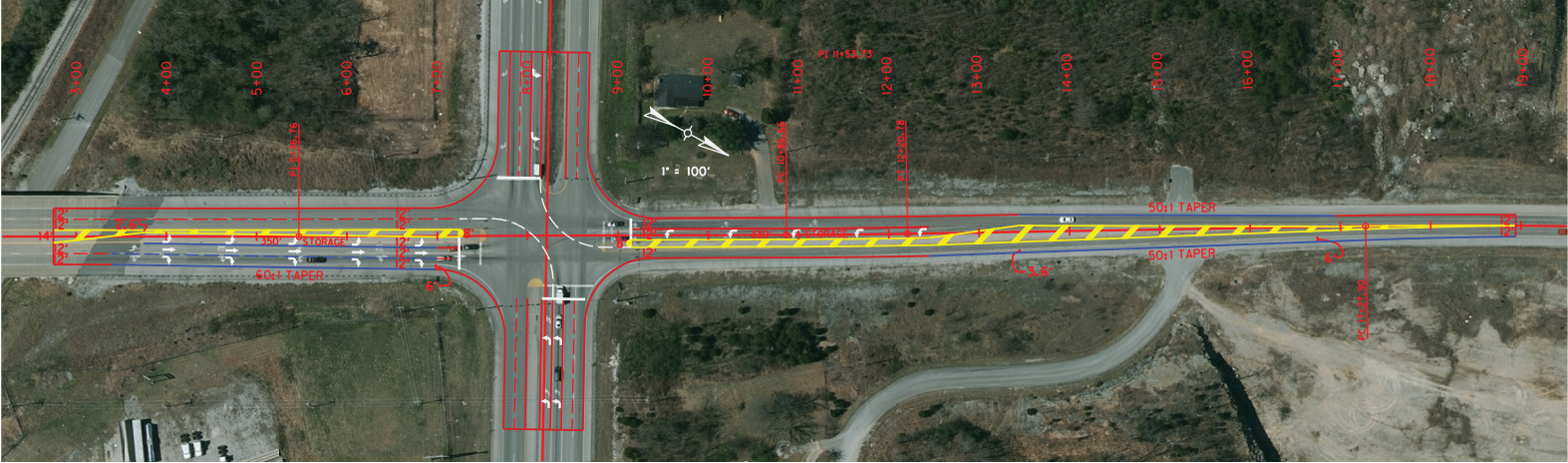
As work progresses, add or remove erosion control measures as required by the BMP applicable to the Contractor's project phasing and construction methods and techniques. Update the volume calculations and modify the BMP as necessary throughout the duration of the project. Ensure that an updated BMP is kept on site and available for public inspection throughout the life of the project.

After all construction is complete, restore all disturbed areas in accordance with Section 212. Completely remove all temporary erosion control devices not required as part of the permanent erosion control from the construction site. Prior to removal, obtain the Engineer's concurrence of items to be removed. Grade the remaining exposed earth (both on and off the Right of-Way) as nearly as possible to its original condition, or as directed by the Engineer. Prepare the seed bed areas and sow all exposed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

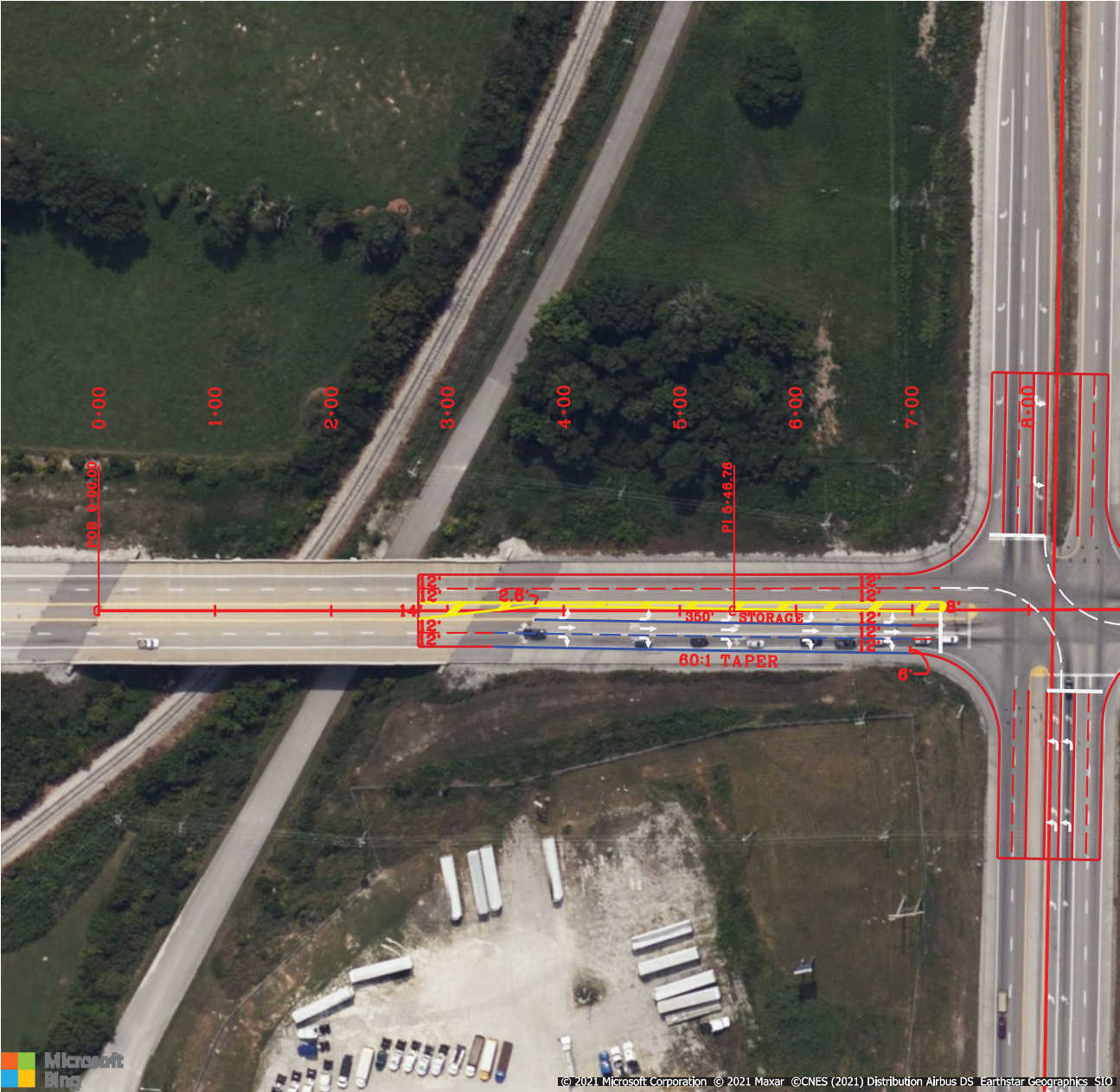
Erosion Control
Page 3 of 3

IV. MEASUREMENT

Contrary to Section 212.04 and 213.04, the Department will not measure Erosion Control items for separate payment, but shall be incidental to the Erosion Control bid item.







Milling Summary

Total	505
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MPT.	INTERSECTION	X-WALKS 6 INCH LF	STP BARS 24 INCH LF	CURVE EA	ARROWS STR	COMB EA	"ONLY" EA	SQFT	CATRAXX 6 INCH LF	"R" 6 FOOT EA	RAILROAD CROSS BUCK 16" LF	NOTES
3.95	KY1247/KY914		60	13	5		2	100				
TOTAL		0	60	13	5	0	2	100	0	0	0	

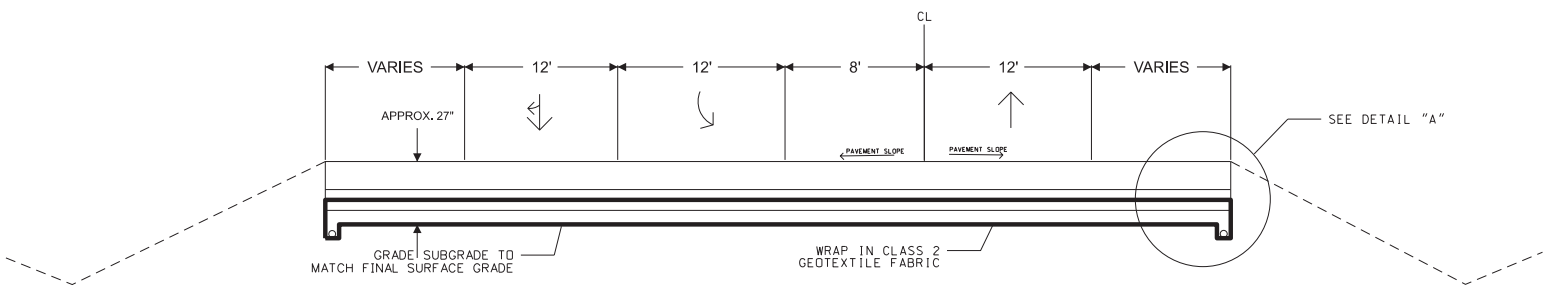
Type 1	0.000
Type 2A	1.000
Type 3	0.000
Type 4	0.000
Type 7	0.000
Terminal	0.000
Connector to Bridge	1.000
End TY 1	

FD04 100 1247 003-005

NOTES:

1. Quantities are for estimating purposes only. For items that need to be precut, the Contractor shall field measure items to verify quantities.
2. Due to phasing of construction, an additional quantity of 1 in. PVC conduit has been accounted for preformed loop installation under partial width JPC Construction.
3. Locate and do not disturb KY 914 loops. If disturbed, replace per KYTC specifications at no cost to the Department.

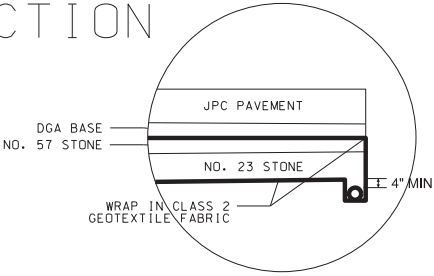
4. Relocate signal heads to properly align with lanes as directed by the Engineer to meet temporary and permanent traffic control plan. Only one "Relocate Signal Head" will be paid for each signal head, regardless of the number of times the signal head is required to be relocated. All labor, materials, and equipment required to adjust any of the signal spans to maintain minimum vertical clearances shall be incidental to "Relocate Signal Head". If the contractor determines that existing pole collars will need to be changed, the contractor shall provide a specification sheet for the proposed replacement collar to the Engineer and the Division of Traffic for review prior to modification of the signal spans.



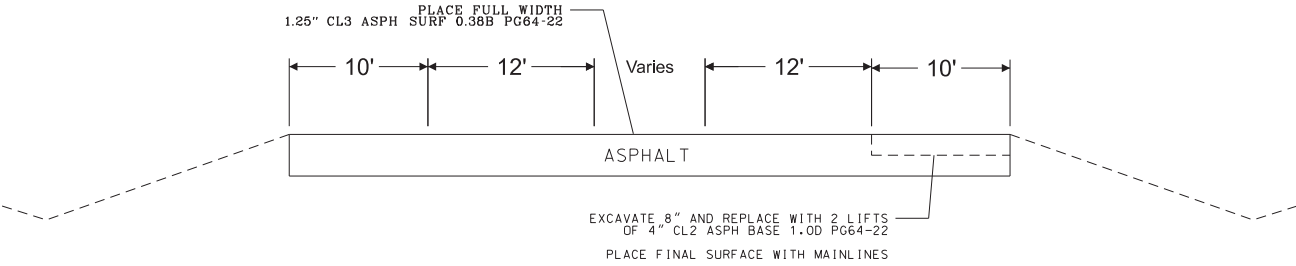
KY1247 TYPICAL SECTION JPC PAVEMENT

NOT TO SCALE

PAVEMENT SCHEDULE	
ROADBED PREPARATION	
CRUSHED AGGREGATE SIZE NO. 23	8 INCHES
CRUSHED AGGREGATE SIZE NO. 57	4 INCHES
CLASS 2 GEOTEXTILE FABRIC	(WRAPPED)/50 YD
TRAFFIC LANES AND SHOULDERS	
DGA BASE	4" DEPTH
JPC PAVEMENT	11 INCHES

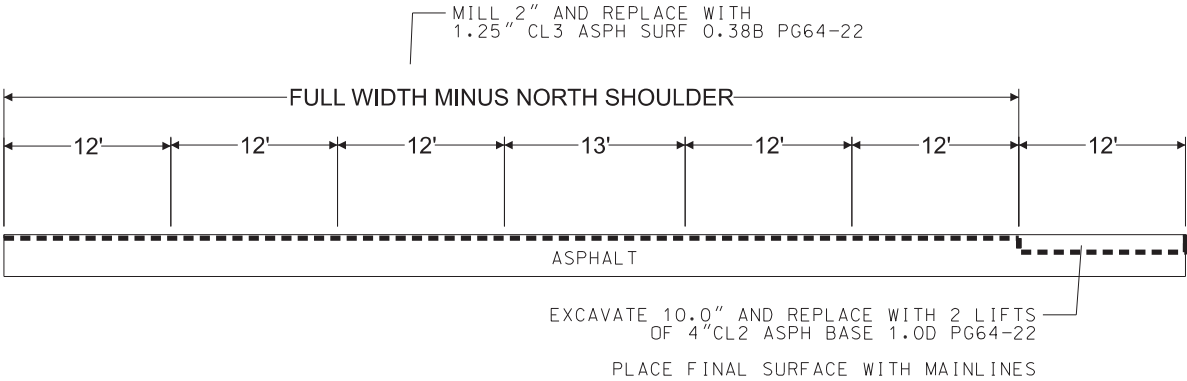


- NOTES
1. FINAL GRADE AND SLOPES SHALL MATCH EXISTING
 2. WRAP SUBGRADE STABILIZED AREA WITH CLASS 2 GEOTEXTILE FABRIC
 3. PAVE TO FULL WIDTH OF EXISTING PAVEMENT
 4. LONGITUDINAL SAWCUT SHALL BE INCIDENTAL TO CONSTRUCTION OF JPC PAVEMENT
 5. GRADE PERD PIPE TO DRAIN. THE ENGINEER WILL DETERMINE THE LOCATION OF EDGE DRAIN AND HEADWALLS



KY1247 TYPICAL SECTION PAVING
(NORTH LEG)

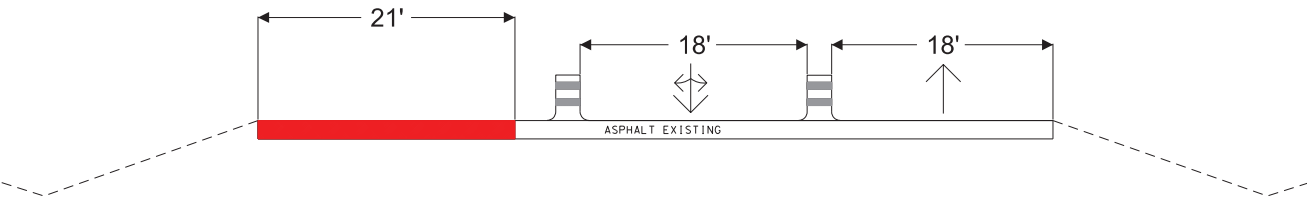
NOT TO SCALE



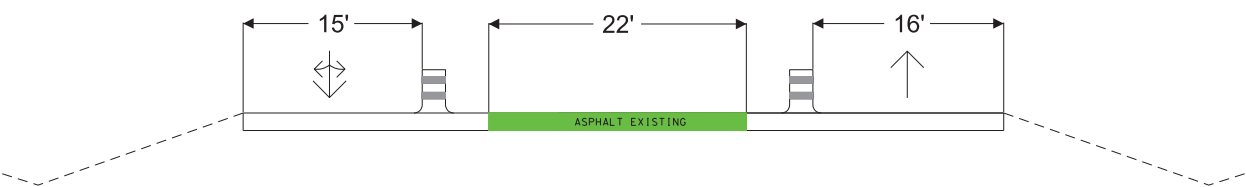
KY1247 TYPICAL SECTION PAVING
(SOUTH LEG)

NOT TO SCALE

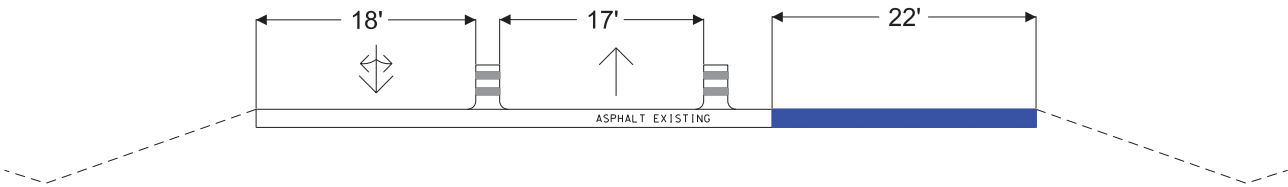
PHASE 1 SOUTH BOUND THRU/RIGHT
LANE AND LEFT TURN LANE

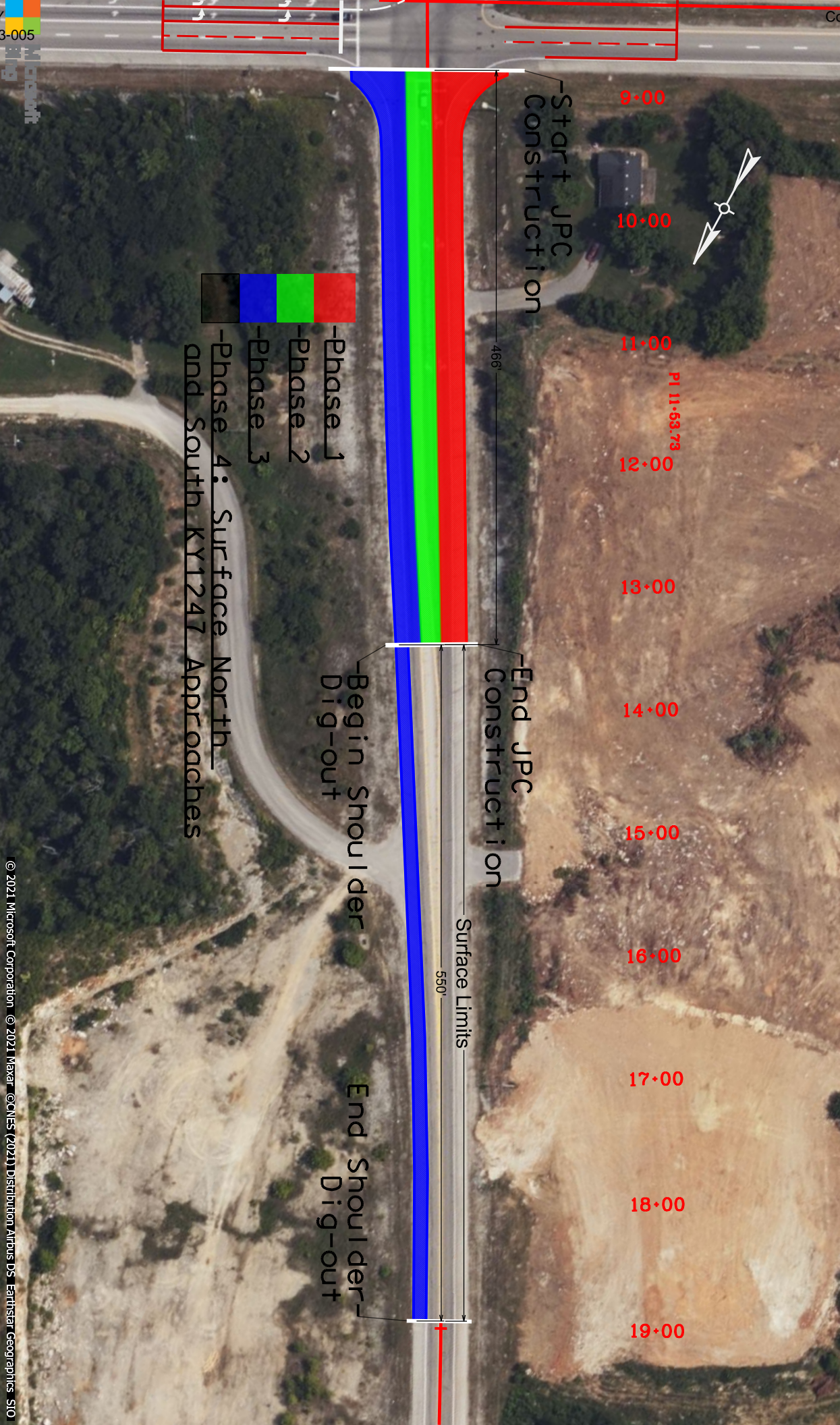


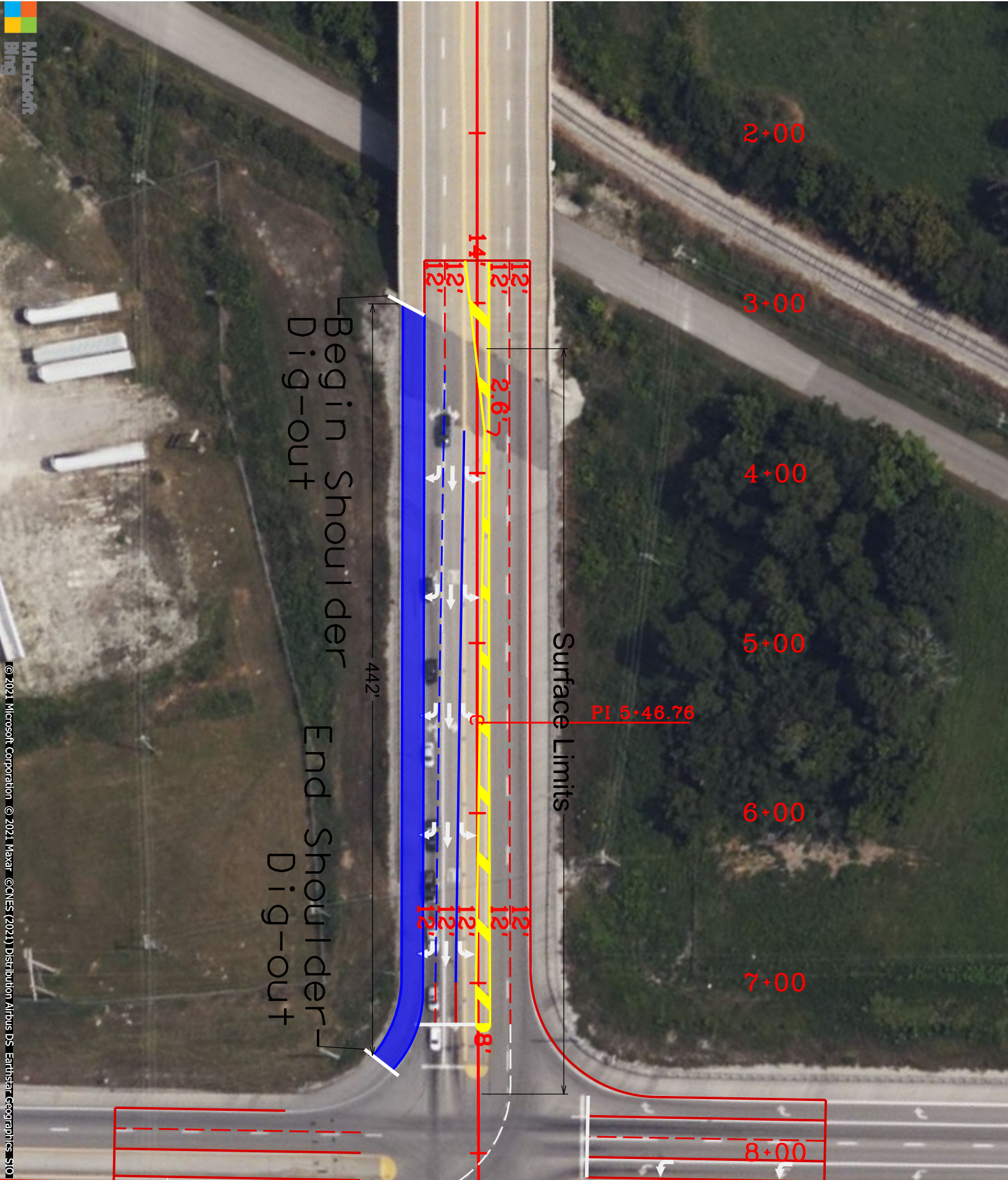
PHASE 2 SOUTH BOUND THRU/RIGHT
LANE AND LEFT TURN LANE



PHASE 3 SOUTH BOUND THRU/RIGHT
LANE AND LEFT TURN LANE







PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2020*.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting.
The Supplemental Specifications can be found at the following link:

<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

- 1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
- 3) Provide a controller consisting of:
 - a) Keyboard or keypad.
 - b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
 - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
 - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
- 10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 11) Provide a photocell control to provide automatic dimming.

- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/⇒⇒⇒/	/MIN/SPEED/**MPH/
/KEEP/LEFT/⇐⇐⇐/	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/***/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/***() FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/AHEAD/	/TWO/WAY/TRAFFIC/

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

11
the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

2020 KENTUCKY STANDARD DRAWINGS

CURVE WIDENING AND SUPERELEVATION TRANSITIONS	RGS-001-07
SUPERELEVATION FOR MULTILANE PAVEMENT	RGS-002-06
MISCELLANEOUS STANDARDS	RGX-001-06
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT.....	RPM-110-07
PAVEMENT STRIPING DETAILS FOR TWO LANE TWO WAY ROADWAYS	TPM-175
LANE CLOSURE TWO-LANE HIGHWAY	TTC-100-05
LANE CLOSURE MULTI-LANE HIGHWAY CASE I.....	TTC-115-04
LANE CLOSURE MULTI-LANE HIGHWAY CASE II	TTC-120-04
SHOULDER CLOSURE.....	TTC-135-03
PAVEMENT CONDITION WARNING SIGNS	TTD-125-06
MOBILE OPERATION FOR PAINT STRIPING CASE I.....	TTS-100-02
MOBILE OPERATION FOR PAINT STRIPING CASE II	TTS-105-02
PERFORATED PIPE TYPES AND COVER HEIGHTS.....	RDP-001-06
PERFORATED PIPE FOR SUBGRADE DRAINAGE ON TWO-LANE (CLASS 2) AND MULTI-LANE ROADS	RDP-005-05
PERFORATED PIPE UNDERDRAINS (LONGITUDINAL AND TRANSVERSE)	RDP-006-04
PERFORATED PIPE HEADWALLS	RDP-010-09
SUBGRADE DRAINAGE - CONCRETE PAVEMENT	RDX-050-05
JOINTED PLAIN CONCRETE PAVEMENT FOR SHOULDERS AND MEDIANS	RPN-001-07
JOINTED PLAIN CONCRETE PAVEMENT	RPN-015-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPN-020-04
STATION MARKINGS - CONCRETE PAVEMENT.....	RPX-001-04
HOT - POURED ELASTIC JOINT SEALS FOR CONCRETE PAVEMENT	RPX-015-04

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

**TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

**LABOR AND WAGE REQUIREMENTS
APPLICABLE TO OTHER THAN FEDERAL-AID SYSTEM PROJECTS**

- I. Application
- II. Nondiscrimination of Employees (KRS 344)

I. APPLICATION

1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.

3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

II. NONDISCRIMINATION OF EMPLOYEES

**AN ACT OF THE KENTUCKY
GENERAL ASSEMBLY TO PREVENT
DISCRIMINATION IN EMPLOYMENT
KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972**

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: January 27, 2017

Kentucky Equal Employment Opportunity Act of 1978

The requirements of the Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) shall apply to this Contract. The apparent low Bidder will be required to submit EEO forms to the Division of Construction Procurement, which will then forward to the Finance and Administration Cabinet for review and approval. No award will become effective until all forms are submitted and EEO/CC has certified compliance. The required EEO forms are as follows:

- EEO-1: Employer Information Report
- Affidavit of Intent to Comply
- Employee Data Sheet
- Subcontractor Report

These forms are available on the Finance and Administration's web page under ***Vendor Information, Standard Attachments and General Terms*** at the following address:
<https://www.eProcurement.ky.gov>.

Bidders currently certified as being in compliance by the Finance and Administration Cabinet may submit a copy of their approval letter in lieu of the referenced EEO forms.

For questions or assistance please contact the Finance and Administration Cabinet by email at **finance.contractcompliance@ky.gov** or by phone at 502-564-2874.

EMPLOYEE RIGHTS UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE

\$7.25

 PER HOUR

BEGINNING JULY 24, 2009

OVERTIME PAY

At least $1\frac{1}{2}$ times your regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR

An employee must be at least **16** years old to work in most non-farm jobs and at least **18** to work in non-farm jobs declared hazardous by the Secretary of Labor.

Youths **14** and **15** years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs under the following conditions:

No more than

- **3** hours on a school day or **18** hours in a school week;
- **8** hours on a non-school day or **40** hours in a non-school week.

Also, work may not begin before **7 a.m.** or end after **7 p.m.**, except from June 1 through Labor Day, when evening hours are extended to **9 p.m.** Different rules apply in agricultural employment.

TIP CREDIT

Employers of "tipped employees" must pay a cash wage of at least \$2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee's tips combined with the employer's cash wage of at least \$2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference. Certain other conditions must also be met.

ENFORCEMENT

The Department of Labor may recover back wages either administratively or through court action, for the employees that have been underpaid in violation of the law. Violations may result in civil or criminal action.

Employers may be assessed civil money penalties of up to \$1,100 for each willful or repeated violation of the minimum wage or overtime pay provisions of the law and up to \$11,000 for each employee who is the subject of a violation of the Act's child labor provisions. In addition, a civil money penalty of up to \$50,000 may be assessed for each child labor violation that causes the death or serious injury of any minor employee, and such assessments may be doubled, up to \$100,000, when the violations are determined to be willful or repeated. The law also prohibits discriminating against or discharging workers who file a complaint or participate in any proceeding under the Act.

ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa and the Commonwealth of the Northern Mariana Islands.
- Some state laws provide greater employee protections; employers must comply with both.
- The law requires employers to display this poster where employees can readily see it.
- Employees under 20 years of age may be paid \$4.25 per hour during their first 90 consecutive calendar days of employment with an employer.
- Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.

For additional information:



1-866-4-USWAGE

(1-866-487-9243)

TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

PART IV

INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V

BID ITEMS

Report Date 11/9/21

Section: 0001 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	1,055.00	TON		\$	
0020	00071		CRUSHED AGGREGATE SIZE NO 57	735.00	TON		\$	
0030	00080		CRUSHED AGGREGATE SIZE NO 23	1,364.00	TON		\$	
0040	00212		CL2 ASPH BASE 1.00D PG64-22	600.00	TON		\$	
0050	00388		CL3 ASPH SURF 0.38B PG64-22	600.00	TON		\$	
0060	01000		PERFORATED PIPE-4 IN	1,000.00	LF		\$	
0070	01010		NON-PERFORATED PIPE-4 IN	20.00	LF		\$	
0080	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM	1.00	LS		\$	
0090	01024		PERF PIPE HEADWALL TY 2-4 IN	2.00	EACH		\$	
0100	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	8.00	EACH		\$	
0110	02014		BARRICADE-TYPE III	8.00	EACH		\$	
0120	02025		JPC PAVEMENT-11 IN/24	3,498.00	SQYD		\$	
0130	02060		PCC PAVEMENT DIAMOND GRINDING	2,500.00	SQYD		\$	
0140	02200		ROADWAY EXCAVATION	2,929.00	CUYD		\$	
0150	02351		GUARDRAIL-STEEL W BEAM-S FACE	350.00	LF		\$	
0160	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		\$	
0170	02369		GUARDRAIL END TREATMENT TYPE 2A	1.00	EACH		\$	
0180	02381		REMOVE GUARDRAIL	350.00	LF		\$	
0190	02562		TEMPORARY SIGNS	640.00	SQFT		\$	
0200	02603		FABRIC-GEOTEXTILE CLASS 2	7,696.00	SQYD		\$	
0210	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0220	02653		LANE CLOSURE	4.00	EACH		\$	
0230	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0240	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0250	02677		ASPHALT PAVE MILLING & TEXTURING	505.00	TON		\$	
0260	02726		STAKING	1.00	LS		\$	
0270	02775		ARROW PANEL	2.00	EACH		\$	
0280	04792		CONDUIT-1 IN	40.00	LF		\$	
0290	04792		CONDUIT-1 IN (PVC)	30.00	LF		\$	
0300	04811		ELECTRICAL JUNCTION BOX TYPE B	2.00	EACH		\$	
0310	04820		TRENCHING AND BACKFILLING	100.00	LF		\$	
0320	04830		LOOP WIRE	1,092.00	LF		\$	
0330	04844		CABLE-NO. 14/5C	1,720.00	LF		\$	
0340	04850		CABLE-NO. 14/1 PAIR	1,485.00	LF		\$	
0350	04894		PREFORMED LOOP/LEAD-IN	50.00	LF		\$	
0360	04895		LOOP SAW SLOT AND FILL	456.00	LF		\$	
0370	06510		PAVE STRIPING-TEMP PAINT-4 IN	7,500.00	LF		\$	
0380	06515		PAVE STRIPING-PERM PAINT-6 IN	7,500.00	LF		\$	
0390	06546		PAVE STRIPING-THERMO-12 IN W	432.00	LF		\$	
0400	06550		PAVE STRIPING-TEMP REM TAPE-W	1,400.00	LF		\$	
0410	06551		PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF		\$	
0420	06554		PAVE STRIPING-DUR TY 1-4 IN W	1,400.00	LF		\$	
0430	06555		PAVE STRIPING-DUR TY 1-4 IN Y	2,000.00	LF		\$	
0440	06568		PAVE MARKING-THERMO STOP BAR-24IN	60.00	LF		\$	
0450	06573		PAVE MARKING-THERMO STR ARROW	5.00	EACH		\$	

Report Date 11/9/21

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0460	06574		PAVE MARKING-THERMO CURV ARROW	13.00	EACH		\$	
0470	06576		PAVE MARKING-THERMO ONLY	2.00	EACH		\$	
0480	20188NS835		INSTALL LED SIGNAL-3 SECTION	11.00	EACH		\$	
0490	20453ES835		PREFORMED QUADRAPOLE LOOPS	204.00	LF		\$	
0500	21415ND		EROSION CONTROL	1.00	LS		\$	
0510	21417ES717		PAVE MARK THERMO CONE CAP-SOLID YELLOW	100.00	SQFT		\$	
0520	21659NN		RELOCATE SIGNAL HEAD	6.00	EACH		\$	
0530	23010EN		PAVE MARK TEMP PAINT STOP BAR-24 IN	100.00	LF		\$	
0540	24900EC		PVC CONDUIT-1 1/4 IN-SCHEDULE 80	90.00	LF		\$	
0550	24955ED		REMOVE SIGNAL EQUIPMENT	1.00	EACH		\$	
0560	24963ED		LOOP TEST	2.00	EACH		\$	

Section: 0002 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0570	02569		DEMOBILIZATION	1.00	LS		\$	